EARLY IDENTIFICATION AND CLASSIFICATION OF JUVENILE DELINQUENTS

HEARING

BEFORE THE

SUBCOMMITTEE ON JUVENILE JUSTICE

OF THE

COMMITTEE ON THE CONSTITUTION UNITED STATES SENATE

NINETY-SEVENTH CONGRESS

FIRST SESSION

ON

OVERSIGHT HEARING TO FASHION PROGRAMS TO REMOVE THE JUVENILE FROM A CRIME CYCLE

OCTOBER 22, 1981

Serial No. J–97–70

Printed for the use of the Committee on the Judiciary

U.S. GOVERNMENT PRINTING OFFICE
88-489 O WASHINGTON : 1982

S521-20

COMMITTEE ON THE JUDICIARY

[97th Congress]

STROM THURMOND, South Carolina, *Chairman*

CHARLES McC. MATHIAS, JR., Maryland
PAUL LAXALT, Nevada
ORRIN G. HATCH, Utah
ROBERT DOLE, Kansas
ALAN K. SIMPSON, Wyoming
JOHN P. EAST, North Carolina
CHARLES E. GRASSLEY, Iowa
JEREMIAH DENTON, Alabama
ARLEN SPECTER, Pennsylvania

JOSEPH R. BIDEN, JR., Delaware
EDWARD M. KENNEDY, Massachusetts
ROBERT C. BYRD, West Virginia
HOWARD M. METZENBAUM, Ohio
DENNIS DECONCINI, Arizona
PATRICK J. LEAHY, Vermont
MAX BAUCUS, Montana
HOWELL HEFLIN, Alabama

VINTON DEVANE LIDE, *Chief Counsel*
QUENTIN CROMMELIN, JR., *Staff Director*

SUBCOMMITTEE ON JUVENILE JUSTICE

ARLEN SPECTER, Pennsylvania, *Chairman*

JEREMIAH DENTON, Alabama
CHARLES McC. MATHIAS, JR., Maryland

HOWARD M. METZENBAUM, Ohio
EDWARD M. KENNEDY, Massachusetts

BRUCE A. COHEN, *Chief Counsel*

CONTENTS

OPENING STATEMENT

Page

Specter, Hon. Arlen, U.S. Senator from the State of Pennsylvania, chairman, Subcommittee on Juvenile Justice 1

CHRONOLOGICAL LIST OF WITNESSES

Monahan, John, Ph. D., professor of law, psychology and legal medicine, University of Virginia School of Law 2

Farrington, Dr. David, Cambridge University, Institute of Criminology, Fellow at the National Institute of Justice, U.S. Department of Justice 31

Patterson, Gerald R., research scientist, Oregon Social Learning Center, Eugene, Oreg 55

Hamparian, Donna, principal investigator, Youth In Adult Court Study, fellow in social policy, Academy for Contemporary Problems, Columbus, Ohio 86

Samenow, Dr. Stanton, clinical psychologist, member, President Reagan's Law Enforcement Task Force 116

Murray, Archibald, attorney in chief and executive director, legal aid society, New York, N.Y 122

ALPHABETICAL LISTING AND MATERIALS SUBMITTED

Farrington, Dr. David:
Testimony 31
Prepared statement 35

Hamparian, Donna:
Testimony 86
Prepared statement 95

Monahan, John:
Testimony 2
Prepared statement 14

Murray, Archibald:
Testimony 122
Prepared statement 125

Patterson, Gerald R.:
Testimony 55
Prepared statement 63

Samenow, Dr. Stanton:
Testimony 116
Prepared statement 120

APPENDIX

Letter from Senator Specter to Charles A. Lauer, Acting Administrator Office of Juvenile Justice and Delinquency Prevention requesting information about serious and violent crime by juveniles and adults, with responses from the Department 135

Prepared statement of Saleem A. Shah, Ph. D., Center for Studies of Crime and Delinquency, National Institute of Mental Health 151

EARLY IDENTIFICATION AND CLASSIFICATION OF JUVENILE DELINQUENTS

THURSDAY, OCTOBER 22, 1981

U.S. SENATE,
COMMITTEE ON THE JUDICIARY,
SUBCOMMITTEE ON JUVENILE JUSTICE,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10 a.m., in room 5110, Dirksen Senate Office Building, Hon. Arlen Specter (chairman of the subcommittee) presiding.

Present: Senator Specter.

Also present: Bruce A. Cohen, chief counsel; Jane Clarenbach, chief clerk; and William W. Treanor, professional staff member.

OPENING STATEMENT OF HON. ARLEN SPECTER, U.S. SENATOR FROM THE STATE OF PENNSYLVANIA, CHAIRMAN, SUBCOMMITTEE ON JUVENILE JUSTICE

Senator SPECTER. Good morning, ladies and gentlemen. We will proceed at this stage with the hearing.

These hearings have been convened by the Juvenile Justice Subcommittee of the Committee on the Judiciary on the subject of early identification and classification of juvenile delinquents. These hearings are an effort to determine the critical point in the crime cycle of the juvenile offender, with a view to fashioning programs to remove the juvenile from that crime cycle.

There is an evolving pattern which I personally have observed and has been noted by many others where the juvenile is a truant at the age of 8 or 9, a vandal at 10 or 11, and guilty of minor petty larceny at 12 or 13, burglary of a vacant building at 13 or 14, perhaps, and robbery at 15 and robbery-murder at 17. The question is whether we can identify in this crime cycle the critical spot where we might direct some greater attention, such as family counseling or perhaps psychological or psychiatric care or a variety of potential corrective actions which might take the juvenile out of the crime cycle.

The resulting benefits are obvious, saving the life of a young person, having him become a productive human being, reducing the tremendous incidence of juvenile crime, and minimizing juveniles graduating to adult offenders and becoming career criminals.

I think that this is a very high priority. It is a big, tough problem, but one that is certainly worthy of our attention and certainly worthy of the national resources if some answer or partial answer can be found to the very high incidence of juvenile crime.

We will proceed at this time to hear Dr. John Monahan, professor of law, psychology, and legal medicine, from the University of Virginia Law School.

Thank you very much, Dr. Monahan. The committee practice is to ask that opening statements be limited to 5 minutes, leaving the maximum amount of time for questioning.

I think it is appropriate to say at the outset that scheduling is always difficult. These hearings, as most of you know, were set up substantially in advance and yesterday the Appropriations Committee scheduled meetings, proceeding in another room in this building on a priority, rush basis because the continuing resolution will expire November 20. We must consider the President's proposal to reduce expenditure further. Very intensive discussions and negotiations involving the Senate, House, and the executive branch are ongoing. It is likely it will be necessary for me to interrupt these hearings to go downstairs and vote. I will come back as promptly as I can and we shall proceed to conclude these hearings as expeditiously as possible this morning.

I do think it is necessary to tell you of those commitments I will have as a member of the Appropriations Committee. It is also necessary to save some of the funding for the juvenile justice programs.

Thank you for coming, Dr. Monahan. We are pleased to have you here and will be glad to hear your testimony.

STATEMENT OF JOHN MONAHAN, PH. D., PROFESSOR OF LAW, PSYCHOLOGY AND LEGAL MEDICINE, UNIVERSITY OF VIRGINIA SCHOOL OF LAW

Mr. MONAHAN. Thank you, Senator.

William James, the great American philosopher and psychologist of the 19th century, once said that we shouldn't hope to write biographies in advance. A good many psychologists and sociologists in this century, however, have attempted to do just that, to forecast or predict what the final biography of a child will look like when it is written.

Of all the things social scientists have sought to anticipate, criminal behavior or delinquency has ranked high on the list, perhaps second only to the prediction of academic achievement as a research priority.

The question whether adult criminal behavior can be predicted when an individual is still a child is interesting in its own right, but its appeal becomes almost irresistable in the context of public policy. It seems like only a small step from the prediction of crime to the prevention of crime.

If we could correctly predict who among a group of juveniles on a street corner will one day be an inhabitant of our prisons and jails, if we could predict which juvenile first offenders will stop at one bite of the apple and which will go on to consume the whole thing, then we could correct criminal tendencies before they manifest themselves in overt behavior or, failing that, at least we would know who we have to watch out for and whom we most need protection from.

I would like to do three things briefly this morning, Senator. The first is to introduce one or two basic concepts of how one goes

about predicting criminally delinquent behavior. The second is to very briefly and selectively review some of the major research studies in the prediction of delinquent behavior and comment on some of the central policy issues I see in the area.

Perhaps the most important concept in predicting criminal or delinquent behavior has to do with the outcomes of any kind of prediction. In this case, one is trying to predict something dichotomous: either an individual will or will not become a criminal.

FOUR POSSIBLE OUTCOMES OF PREDICTIVE DECISIONS

Predicted behavior	Actual behavior	
	YES	NO
YES	true positive	false positive
NO	false negative	true negative

The chart I have prepared displays the four outcomes that can occur in the prediction of criminal behavior. What you are trying to do is predict from things known about the individual as a child, whether or not the individual will or will not become a criminal as an adult. Is the prediction right or wrong? Will, in fact, the individual be a criminal or not.

When you predict an individual will become delinquent and you find out later that indeed the individual is criminal delinquent, that's called a true positive—the upper left-hand corner on the chart—you make a positive prediction which turns out to be correct or true. When one predicts that an individual will not become a criminal and find out indeed he is not this is a true negative. These are the two things people making predictions of criminal behavior try to do.

There are two mistakes also. The upper right-hand corner, you can predict an individual child will be criminal or violent when he or she grows up, then find out that the child is not criminal or violent. That kind of mistake is called a false positive. You make a positive prediction of criminality which turns out to be incorrect or false.

The second kind of error, the bottom left, is called a false negative. You say this child will not become criminal or delinquent but in fact he or she will.

Those are the two kinds of mistakes—the two things people predicting criminal behavior wish to avoid. I think it's important to note the two kinds of mistakes have different costs associated with them. The cost of the false positive, predicting someone will be delinquent, is often that juvenile is put in a delinquency prevention program. For example, the individual is institutionalized when in fact there was no social need for that. The individual won't be violent anyway.

The cost of a false negative is predicting that an individual won't become criminal and therefore not intervening in his life and the individual then goes out and commits more violent crime.

Those are the four possible outcomes of prediction and the kinds of costs associated with each mistake.

The second concept related to this has to do with decision rules. Any time you assess the likelihood an individual child will become criminal, all a social scientist can do is give the individual a probability score—to say he has a 5-percent chance, a 10-percent chance, or a 90-percent chance.

The question then becomes what point is sufficient to justify intervention to prevent the delinquency. Do we intervene in all children with a 25-percent chance of becoming criminal, for example, or must the predictive probability be two-thirds before we intervene? That decision rule, intervene only when above 50–50, for example, or above 25–75, is called the decision rule and that decision rule will determine the kinds of mistakes that are made in prediction.

If you set the decision rule very low so that you will intervene to prevent delinquency any time an individual has a 1-percent chance of becoming delinquent you will get a large portion of the people who will become delinquent. But the cost of that is you will have

an enormous number of false positives also. To set your criterion low, you get who you want but you get a lot of other people as well.

On the other hand, if you set the decision rule very high, if you say we will only intervene when an individual has a 90-percent chance of becoming delinquent, you will make fewer mistakes in the sense of false positives, but you will also miss a great number of people who in fact become delinquent and who you would have liked to have gotten.

So it's important to know what the outcome of predictive decisions are and the social policy choice. At what point should preventive interventions take place? It seems to me it is probably the major and most vexing policy question in this area, because if you intervene too soon you will have a large number of false positives. If you intervene too late you will have a large number of false negatives.

The kinds of trade-offs which have to be made, I think, are very difficult ones. I will just mention briefly some of the key research studies, because the other presenters this morning will describe in more detail their own studies.

There was one extensive review a few years ago of 1,500 studies in the literature looking at violent behavior as adults, asking what factors in the childhoods of these individuals would have allowed them to predict who would have become violent.

The author's report of the four early warning signs of adult violence were fighting, temper tantrums, school problems, and inability to get along with others. So a child, in other words, is indeed father or mother to the adult.

One of the most famous studies of childhood predictions of later delinquency was the study by Sheldon and Eleanor Glueck of Harvard Law School, called "Unravelling Juvenile Delinquency," published in the 1950's. They claim three factors—supervision by the mother, discipline by the mother, and cohesiveness of the family—were predictive of later crime in adolescent boys. That research has been very methodologically criticized.

More recently, researchers in upstate New York followed 400 males and females from the time they were 8 until the time they were 18. They wanted to see what, at age 8, predicted those people who would be aggressive at age 19.

What they concluded was largely the same as virtually every other study in this area. That is, the best predictor of future aggression and violence is past aggression and violence. That was true, irrespective of IQ, social class, or anything else.

They did find some other factors predictive of violence. For example, the preference on the part of boys for watching violent television programs was statistically significant. Boys who in the third grade——

Senator SPECTER. What is the factual basis for that?

Mr. MONAHAN. What they found was boys in the third grade who preferred television programs such as "Gunsmoke" and "Have Gun, Will Travel," were rated by their peers 10 years later as three times more aggressive than boys who in the third grade preferred "Ozzie and Harriet," "I Love Lucy," and "Lawrence Welk." [Laughter.]

Senator SPECTER. How does that really translate, though, into a likelihood of being engaged in violent crime?

Mr. MONAHAN. I think the flaw with that research is that it's not clear from that study why any normal 8-year-old boy would prefer "Lawrence Welk" to "Have Gun, Will Travel" in the first place.

Senator SPECTER. That's the other side of the coin. But simply to say that the individual is going to be aggressive—he may be a good candidate for the U.S. Senate.

Mr. MONAHAN. They were looking more at social aggressiveness, like hitting other children, not aggressiveness in terms of getting things accomplished—more antisocial aggression rather than business or political aggression.

Joan McCord at Drexel University in Philadelphia published a 30-year followup of over 200 boys between 1939 and 1945, a major delinquency prevention study. She managed to find almost all of these people who were still alive 30 years later. She found that 36 percent of later violent crime among this group could have been predicted by knowing childhood factors. Putting together what was known about those people in 1939 you could predict 36 percent of the later violence.

Boys who lacked supervision, whose mothers lacked self-confidence and who had been exposed to parental conflict and aggression were the ones most likely to be arrested for violent crime within the next 30 years.

Probably the most influential research in the last decade is research you are probably familiar with, the research done by Prof. Marvin Wolfgang and his colleagues at the University of Pennsylvania—the Philadelphia cohort study—following a group of about 10,000 boys born in Philadelphia in 1945, following them throughout their lives to see what predicted whether or not the people in fact were engaged in violent crime, any kind of crime.

Wolfgang found that 35 percent of all boys in Philadelphia born in 1945 had at least one nontrivial contact with the police by the time they were 18. The factors of race and socioeconomic status were reported by Wolfgang to be the boys most strongly affecting the data.

Twenty-nine percent of the whites, 50 percent of the nonwhites, 26 percent of the higher socioeconomic status, and 45 percent of the lower economic status boys had at least one of these contacts.

Wolfgang defined chronic offenders as those who committed five or more violations. Six percent of the total sample were chronic offenders by that definition and that 6 percent committed more than half of the total amount of crime. So there was a relatively small group of people committing most of the crime by that cohort.

There are many other studies predictive of criminal behavior which I won't describe. Some of them will be presented by the witnesses who follow me.

What I would like to do now is to summarize what I see as the conclusions that can be drawn from these studies. I will emphasize the factors I mentioned. I do not suggest them for actual use in social policy, prediction of criminal behavior. Morally it seems to me you can't use some factors to predict criminally behavior, such as race, regardless of whether or not you think they predict criminality or the extent to which they predict criminality.

What I would like to do is separate scientific issues—what can be used in anticipating future crime—from moral issues, what should be used in terms of prevention programs?

It seems to me that from a variety of studies a reasonable conclusion is that there are three clusters of things that relate to future violent behavior.

CHILDHOOD PREDICTORS OF CRIMINALITY

A. PARENT FACTORS

1. Parents themselves criminal
2. Lack of supervision of child
3. Conflict between parents
4. Harsh physical discipline

B. CHILD FACTORS

1. Gender
2. Race
3. I.Q.
4. Temperament
5. Age of onset of delinquency

C. SCHOOL FACTORS

1. Interpersonal difficulties
2. Academic difficulties

The first cluster might be called parent factors, having to do with an individual's parents.

I think from the research four factors seem to come through in several studies. The first is if the parents themselves are criminal they are more likely to have children who become criminal. Second, lack of parental supervision has come through in terms of predicting future criminal behavior. Third, conflict and disharmony between the parents and, fourth, the parents' use of harsh physical techniques for child rearing seems to be conducive to later criminality.

The second cluster has to do with the child, and these factors are mostly demographic. Gender, every study ever done in terms of violent crimes, for example, has found males to be more prone to be violent than females by a ratio of about 9 to 1. A good number of studies have found, as I mentioned in discussing the Wolfgang study, have found race to discriminate between those who will and will not later be arrested for a crime.

I think the most distressing aspect of the Wolfgang study in Philadelphia was the extent to which race affected the data. I think the possibility that any delinquency prevention program will have a racially disparate impact on the population presents the most profound moral and legal questions in this area.

IQ is a factor. Numerous studies have found it to be related to criminal behavior and aggressive or impulsive temperament. The more daring and impulsive the individual the more likely to be criminal.

And, finally, the age at onset of delinquency. The younger the individual is when he or she first comes in contact with the law the more likely they are to go on to crime.

And the final cluster might be called school factors. Here, the more interpersonal difficulties the child has at school, the more academic difficulties the child has at school the more likely he or she will be to commit a violent crime.

If you put all these things together in terms of this analysis, the question is how accurate can you be, taking all of this into account, in terms of predicting later criminal behavior? I think it's very difficult to say. I think from the study that David Farrington will describe, which in my opinion was surely one of the best of the prediction studies, you might conclude it is possible, at best, to identify a high risk group of juveniles, of whom about 50 percent will later go on to commit criminal behavior.

Fifty percent true positives and 50 percent false positive—that's the best anyone has been able to find.

Senator SPECTER. Dr. Monahan, on the factors which you have identified—the difficulties at home, the characteristics of the mother, the watching of certain TV shows—those certainly have an obvious statistical base for predicting future acts of violence, but wouldn't crimes themselves have an even more significant basis for the prediction of future acts of violence?

If you had a juvenile who has engaged in burglary of a vacant house or petty larceny, contrasted with one who does not, there would certainly be a higher likelihood, would there not be, of that individual turning to armed robbery at a later stage?

Mr. MONAHAN. Clearly. From the Wolfgang study, the probability of a fifth arrest, given you had been arrested four times already, was 80 percent. The probability of the 11th arrest, given you had been arrested 10 times, is 90 percent.

Senator SPECTER. I am familiar with Dr. Wolfgang's study. He testified at an earlier hearing and the essential point of his testimony was there are a tremendous number of juveniles who have an initial contact. That drops off significantly for a second contact, and that drops off significantly to a third contact.

But once the juvenile has had three contact with the law then there is a higher likelihood of that pattern being repeated. That brings me to the next question. While the factors that you have described are interesting and doubtless useful for a great many purposes, are they really significantly helpful in having us narrow the field for the juveniles to which we are going to devote crime prevention resources?

When we look at the tremendous number of juveniles who are candidates, any juvenile is a candidate to become a career criminal. Anyone is at the start. We just don't know and we have very limited resources. So we are going to have to decide, if we move ahead with such a program, which of the juveniles and at what stage can we use our limited resources.

So my question is: Is it realistic to go beyond three contacts with the law to look at the kinds of factors that you have described? Do we not get into such a massive population if we look at the people who have had disruptive home lives or parents using force in discipline or watching Gunsmoke, that it tells us so much as to tell us nothing?

Mr. MONAHAN. Yes. If you went below four criminal offensives.

Senator SPECTER. Then it's your conclusion that you ought to start on the paring process with those who have had four criminal offenses?

Mr. MONAHAN. No. It would be my conclusion that the number of prior offensives the individual has had would be the best predictor of criminal behavior.

Senator SPECTER. All right. If he's had 15, then we know we've got a problem. If he's had four, is that the proper place? Where do you draw the line? Where do you start to apply the limited community resources to try to turn these juveniles around?

Mr. MONAHAN. I think Professor Wolfgang's conclusion of four is not, it seems to me, an unreasonable one.

Senator SPECTER. Is it a reasonable one?

Mr. MONAHAN. Those are questions of public policy rather than social science in terms of where on the predictive scale you want to intervene.

Senator SPECTER. Well, you have a pretty good idea. You have a better idea than I do about what the studies show. That is why you are there and I am here. What is your judgment? We have got to move ahead.

Mr. MONAHAN. It's my judgment that if any intervention is to take place based on the factors——

Senator SPECTER. It really isn't why you're over there and I am over here, but why you are over there. [Laughter.]

Mr. MONAHAN. If any intervention is to take place along the lines of early delinquency prevention, which is often taken in this field to mean preventing delinquency before individuals have committed any criminal act——

Senator SPECTER. Is that realistic? That would be ideal, but do we have a ghost of a chance of doing that?

Mr. MONAHAN. It certainly is not realistic in my opinion if the intervention is to be involuntary in nature.

Based upon the research I have gone over and thinking of the costs and benefits of intervention, voluntary intervention—the provision of some kind of social service, for example, providing children who are having difficulty with the school factors with the opportunities to work on those things in a voluntary way—it seems to me may have a preventive impact.

Senator SPECTER. So in terms of voluntary intervention we should go to the earliest stage.

The issue is, At what point do we intervene on a nonvoluntary basis?

Mr. MONAHAN. Oh, nonvoluntary intervention in terms of predicting delinquency? I personally think we should wait until the individual goes into the system a good way.

Senator SPECTER. How far?

Mr. MONAHAN. In terms of my own nonscientific social policy position on the area?

Senator SPECTER. Give me the best judgment you can.

Mr. MONAHAN. The point I am trying to make is there are scientific judgments and moral and policy judgments, and I think it's important to separate them.

Senator SPECTER. If you want to give me two judgments, give me two judgments. I'm trying to get a conclusion. We have five more witnesses to hear and debate on the appropriations bills is beginning.

Mr. MONAHAN. My social policy decision would be the same as Dr. Wolfgang's. We should wait until the individual has had four contacts with the criminal justice system.

Senator SPECTER. Four contacts. All right, you've got somebody with four contacts. That's a starting point.

What, given an ideal system, do you do with the juvenile? What are the remedies?

Mr. MONAHAN. For a juvenile with——

Senator SPECTER. Four contacts. We have legislation. The legislation provides, in the first paragraph, that once there are four contacts with the criminal justice system that juvenile will be subjected or benefitted from or made a party to certain remedies.

Now we are at paragraph 2. The remedies are (a)——

Mr. MONAHAN. The 20th Century Task Force on Sentencing in the juvenile justice system came out with recommendations for more determinate sentencing for juveniles, just as there is movement for more determinate sentencing for adults.

Senator SPECTER. We don't have to start with sentencing, do we? Is sentencing the only alternative?

Mr. MONAHAN. Or some kind of adjudicatory procedure. Are you thinking of——

Senator SPECTER. There's an adjudicatory procedure. One alternative would be counseling with their parents. That's something we did in the Philadelphia juvenile court system. We found that useful.

Another alternative is psychological counseling, psychiatric counseling. What are the range of alternatives we can go with short of incarceration?

Mr. MONAHAN. If what you are looking for is research support for the counseling programs that have been demonstrated to reduce delinquency, then it seems to me they are going to be very hard to come by.

The research on rehabilitation in terms of using family counseling, for example, has been more depressing than a lot of people once hoped for.

Senator SPECTER. They haven't been successful, you are saying?

Mr. MONAHAN. That's correct.

Senator SPECTER. What has been successful?

Mr. MONAHAN. In terms of prevention of future crime, in terms of demonstrated results, I think the people who will speak after me might talk in terms of their own particular studies, but as I read the literature there has yet to be an intervention to treat demonstrated criminal tendencies that has resulted in a significant decrease in later violent crime.

Senator SPECTER. You are saying we do not know anything?

Mr. MONAHAN. That's what I am saying, yes, sir.

Senator SPECTER. All right.

[The prepared statement of Dr. Monahan follows:]

88-489 O—82——2

PREPARED STATEMENT OF JOHN MONAHAN, PH. D.

William James once observed that we cannot hope to write biographies in advance. While it is surely true that we cannot fill in all the details, there seems to be an abiding belief, William James to the contrary, that we can at least outline the general plot of people's lives before the stories unfold of their own accord. Indeed, many believe that the first few chapters of a person's life--infancy and childhood--incubate the themes that will be played out, for better of worse, in all the rest. Almost every modern psychological theory, from the superego deficiencies of the psychoanalysts to the modeling theory of the behaviorists, would support this belief.

Far from being the occult crystal-ball activity it sometimes is made to appear, prediction is part of life. The human race would not have survived as long as it has were our ancestors not adept at predicting in some rough and intuitive way what nature had in store for them, such as lions may bite and falling rocks crush, so it is best to avoid both whenever possible. The prediction of the movement of the stars and the rising of the tides were among the first scientific puzzles to preoccupy humankind. On a more contemporary level, much of our own lives is spent predicting how others will respond to us, and we to them, as lover, friend, or colleague. The prediction of harm is likewise per-

vasive: We drive through green lights only because we predict that cross-traffic will stop on the red.

The kind of prediction we are concerned with here is of delinquent or criminal behavior. I will first consider some issues in how one goes about predicting behavior, then selectively review the research on childhood predictors of delinquent or criminal behavior, with particualr emphasis on violent forms of delinquency or crime, and finally address what I see as some central policy issues in the area.

I. Core Concepts in Prediction

(1) Predictor and Criterion Variables

The process of predicting any kind of behavior requires that a person be assessed at two points in time. At Time One, he or she is placed into certain categories that are believed, for whatever reason, to relate to the behavior one is interested in predicting. If one is interested in predicting how well a person will do in college, the categories might be "grades in high school," "letters from teachers" (rated in some way such as "very good," "good," and "poor"), and "quality of the essay written for the application" (perhaps scored on a 1 to 10 scale). These are all predictor variables, categories consisting of different levels that are presumed to be relevant to what is being predicted.

For delinquent or criminal behavior, the predictor variables might include "frequency of past aggression," "broken home," or "parent's drug abuse."

At some specified time in the future, Time Two, one performs another assessment of the person to ascertain whether he or she has or has not done what was predicted. This entails assessing the person on one or more criterion variables. For predicting "success" in college, the criterion variables might be "college grades, " or "class rank," or "whether or or not the person got a job in the field he or she wanted" (scored simply as "yes" or "no"). For criminal or delinquent behavior, the criterion variables may include "self-report," "arrest" or "conviction" for crime, or involuntary commitment as "dangerous to others." They could also include professional or peer ratings of "aggressive behavior" or scores on psychological tests of aggression.

(2) Outcome of Positive and Negative Predictions

There are four statistical outcomes that can occur when one is faced with making a prediction of any kind of future behavior. Table 1 displays these outcomes. One can either predict that the behavior, in this case, crime or delinquency, will occur ("Yes") or that it will not occur ("No"). At the end of some specified time period, one observes whether the predicted behavior actually has occurred ("Yes") or has not occurred ("No").

Table 1—Four possible outcomes of predictive decisions

Predicted behavior	Actual behavior	
	Yes	No
Yes	true positive	false positive
No	false negative	true negative

If one predicts that crime will occur and later finds that, indeed, it has occurred, the prediction is called a True Positive. One has made a positive prediction, and it turned out to be correct or true. Likewise, if one predicts that crime will not occur and it in fact does not, the prediction is called a True Negative, since one has made a negative prediction of crime and it turned out to be true. These, of course, are the two outcomes one wishes to maximize in making predictions.

There are also two kinds of mistakes that can be made. If one predicts that crime or delinquency will occur and it does not, the outcome is called a False Positive. One made a positive prediction, and it turned out to be incorrect or false. In practice, this kind of mistake may mean that a child has unnecessarily been put in a program to prevent an act of crime that would not have occurred in any event. If one predicts that crime will not occur and it does occur, the outcome is called a False Negative. In practice, this kind of mistake often means that someone who is not put in a preventive

program, or who is released from the program, commits an act of crime or delinquency in the community. These two outcomes, obviously, are what predictors of crime try to minimize.

(2) Decision-rules

Decision rules are "guidelines for the handling of uncertainty" (American Psychiatric Association 1974, p. 26). They involve choosing a "cutting score" on some predictive scale, above which one predicts for the purpose of intervention that an event "will" happen. A cutting score is simply a particular point on some objective or subjective scale. When one sets a thermostat to 68°, for example, one is establishing a "cutting score" for the operation of a heating unit. When the temperature goes below 68°, the heat comes on, and when it goes above 68°, the heat goes off. In the treatment of cancer, as another example, one might decide that if tests show that a patient has a 20 percent chance of having cancer, it is best to operate. The decision rule or cutting score would then be a 20 percent probability. More than that you operate; less than that you don't. The "beyond a reasonable doubt" standard of proof in the criminal law is a cutting score for the degree of certainty a juror must have in order to vote for conviction. Conviction is to occur only if doubt is nonexistent or "unreasonable" In civil law, on the other hand, the juror generally need only decide which of two

parties to a suit has the "preponderance of the evidence" on his or her side. Reasonable doubts can still remain. Clearly, the cutting score can be set anywhere and can vary with the purpose and consequence of the prediction.

Where the cutting score is set will determine the ratio of true to false positives. If the cutting score is set very low (e.g., "more crime-potential than the average child"), there will be many true positives, but many false positives also. If it is set very high (e.g., 90 percent likely), there will be fewer false positives, but fewer true positives as well.

It should be noted that the cutting score also determines the ratio of true positives and true negatives predicted and, therefore, the absolute number of successful predictions. If the decision rule is such that the cutting score is set very high, one will correctly identify most of the children who will not be criminal, but at the expense of missing many of those who will be. Likewise, if the cutting score is low, one will correctly identify most of the children who will be criminal, but at the cost of misidentifying many who would be safe.

These, then, are some of the core concepts in prediction that should be kep in mind when evaluating the prediction research presented below.

II. Illustrative Research on Childhood Predictors of Adult Violence

One survey (Justice, Justice, and Kraft 1974) reviewed 1,500 references to violence crime in psychiatric literature, interviewed over 750 professionals who dealt with violent persons, and retrospectively analyzed over 1,000 clinical cases to ascertain the most cited childhood predictors of adult violence. The authors reported that the four "early warning signs" were fighting, temper tantrums, school problems, and an inability to get along with others. The child, in other words, is indeed father or mother to the adult.

Based on discussions with large groups of psychiatrists and psychologists, Goldstein (1974) concluded that the "agreed upon" predictors of adult violent crime were "a childhood history of maternal deprivation, poor father identification, or both; noctural enuresis; possibly fire setting; violence toward animals; and brutilization by one or both parents" (p. 27). Diamond (1974) comments that the conclusion of the clinicians cited by Goldstein represents the sum total of our present "scientific" knowledge concerning predictive factors of murderous violence.

> Yet I have repeatedly found some, and sometime all of these predictive factors in individuals who have never committed even the slightest harm act, let alone assault or murder. And

> I have examined offenders who have committed the extraordinarily brutal acts of great violence and lethality who possessed none of these factors. (Diamond 1974, p. 444.)

One of the most famous studies of the childhood correlates of later criminal behavior is Unraveling Juvenile Delinquency, published by Glueck and Glueck in 1950. The Glucks claimed that three factors - supervision by the mother, discipline by the mother, and cohesiveness of the family - were predictive of later crime in young adolescent boys. This research is among the most methodologically criticized in all of criminology, and there appears to be a consensus that the practical utility of the Glueck factors in predicting criminality is marginal at best.

Lefkowitz, Eron, Walder, and Huesman (1977) published the results of a longitudinal study entitled Growing Up To Be Violent. This research followed a sample of over 400 males and females in Columbia County, New York, from ages 8 to 19. They used peer ratings, parent ratings, self-report, and a personality test to measure "aggressive behavior." Lefkowitz and his coworkers found that "aggression at age 8 is the best predictor we have of aggression at age 19, irrespective of IQ, social class, or parents' aggressiveness" (p. 192). Several other variables, among them the father's upward social mobility, low identification of the child with his/her parents, and a preference on the part of boys for watching

violent television programs, were statistically significant predictors of aggression at age 19. Boys who, in the third grade, preferred television programs such as "Gunsmoke" or "Have Gun, Will Travel" were rated by their peers 10 years later as three times as aggressive as boys who, in the third grade, preferred "Ozzie and Harriet," "I Love Lucy," or "Lawrence Welk." What is not clear from the study is why an 8-year-old boy would prefer "Lawrence Welk" to "Have Gun, Will Travel" in the first place.

McCord (1979) has reported on a 30-year followup of 201 boys who participated in the Cambridge-Somerville Youth Project between 1939 and 1945. She found that 36 percent of the incidence of later violent criminality could be accounted for by childhood predictive factors. "The boys who lacked supervision, whose mothers lacked self-confidence, who had been exposed to parental conflict and to aggression were subsequently more convicted for personal crimes" (McCord 1979).

In what has become the most influential criminological research of the past decade (Geis and Meier 1978), Wolfgang, et al. (1972) obtained information on all boys born in Philadelphia in 1945 who lived there at least between their 10th and 18th birthdays. Of the 9,945 boys studied, 3,475, or 35 percent, had at least one recorded contact with the police by age 18. Wolfgang et al. found that the variables of race and socioeconomic status (SES) were most strongly

associated with reported delinquency: 29 percent of the whites, but 50 percent of the nonwhites, and 26 of percent the higher SES, but 45 percent of the lower SES boys had an offense record.

"Chronic" offenders were defined as those who committed five or more violations. Six hundred and twenty-seven boys - 6 percent of the sample and 18 percent of the total number of offenders - were responsible for over one-half of all offenses committed.

Chronic offenders in the cohort had a greater number of residential moves, lower IQ scores, a greater percentage classified as retarded, and fewer grades completed than did either the nonchronic or the one-time offenders, even when race and SES were held constant (p. 248).

Wolfgang (1977) has updated his research to include data on the subjects up to age 30. Only 5 percent of the subjects had an arrest record only as an adult (i.e., after age 18 but not before). While most juvenile offenders (61 percent) avoid arrest upon reaching adulthood, the chances of being an adult offender are almost four times greater if one had a juvenile record than if one did not. While 6 percent of the sample were "chronic" offenders by age 18, 15 percent were chronic by age 30. The probability of future arrest varied directly with the probability of past arrest: The probability of a fifth arrest (for any crime) given four "priors" was

.80; the probability of an eleventh arrest given ten previous arrests was .90. The probability of a fifth serious (or "index") offense with four prior arrests was .36; the probability of an eleventh serious offense given ten previous arrests was .42.

One of the best known and surely one of the most sophisticated longitudinal studies of the development of delinquency and crime is the Cambridge Study of Farrington and West (1980). The researchers studied 411 males contacted in 1961 and 1962 when they were 8 and 9. It was "overwhelmingly a traditional British white working class sample" (p. 137). The boys were given tests in school at ages 8, 10 and 14, and were interviewed at ages 16, 18 and 21. Their parents were interviewed at home at regular intervals, and their teachers also completed questionnaires. Records of criminal and delinquent behavior were obtained from the Criminal Record Office in London.

About one-fifth (20.4%) of the boys were convited of some delinquency offense between their 10th and 17th birthdays. The results of the predictive analyses are very complex, but can be summarized fairly straightforwardly: only two behavioral measures and five background measures were independently predictive of delinquency. The delinquents were more likely than the non-delinquents to have been rated "troublesome" and "daring" during primary school. They also tended to come from poorer families,

from larger-sized families, to have parents who were themselves criminal, to have parents who used harsh methods of child rearing, and to have low IQ. The more harsh the child rearing, the more violent the delinquency. Aggression at age 8 was strongly related to aggression at age 18.

When these background factors were retrospectively combined to see the extent to which they would have predicted future delinquency, a "vulnerable group" was identified, of whom about 50 percent became delinquent. This was only slightly better than making predictions on the grounds of teacher ratings of "troublesomeness" alone. While the seeds of delinquency can often be noticed in school, the school experience itself did not appear to have any positive or negative effect on later delinquency. Contact with the juvenile justice system, however, did seem to have an effect: self-reported delinquency significantly increased after conviction for delinquency.

Farrington et al. (1975) tried to answer the question why criminal fathers tend to have criminal sons. They found no evidence that criminal fathers encouraged their sons to commit crime. The major difference between convicted fathers and unconvicted ones was that the convicted fathers excercised poorer supervision over their sons.

Felthaus (1980) reported a retrospective interview study of 149 people admitted to a military

psychiatric unit. Some subjects had a history of serious assaultive behavior and others did not. They were interviewed about various aspects of their childhood, to see which factors differentiated the two groups. The Aggressive Psychiatric Sample, compared with the Nonaggressive Sample, were significantly more likely to report having a variety of fights and violent outbursts, being suspended and truant from school, having frequent headaches and temper tantrums, setting uncontrolled fires, being cruel to animals, and enuresis beyond nine years of age. These latter three factors form the "triad" ofen referred to in the literature. As well, the Aggressive Psychiatric Sample was more likely to have alcoholic father, to have received corporal punishment by both the mother and the father, and in particular to have recieved blows to the head by both parents, often resulting in a loss of consciousness. Felthaus (1980, p. 107-108) notes that these items "should not be considered as pathognomonic correlates of aggression. One would expect, however, that a combination of several of these symptoms in a child indicates a burgeoning difficulty in controlling aggressive impulses which could worsen in his adolescent and adult years."

Summary

It is, of course, difficult to summarize the conclusions of so many studies on such diverse populations. I would say, however, that the various predictive factors fall into three clusters.

Custer A: Parent Factors: Four factors relating to a child's parents seem to come through in several studies as relating to the childs later criminal or delinquent behavior: (1) the parents themselves being criminal; (2) lack of parental supervision of the child; (3) conflict and disharmony betwen the parents; and (4) parents use of harsh and physical techniques of child rearing.

Cluster B: Child Factors: Five factors relating to the child him or herself seem to emerge from several of the studies: (1) gender (males much more likely to become criminal than females); (2) race (blacks much more likely to become criminal than whites); (3) IQ (the lower the measured IQ, the more likely later criminality); (4) an aggressive or impulsive temperament (the more aggressive, impulsive, or "daring" the child, the more likely the later criminality); and (5) age at onset of delinquency (the younger the child is when he or she begins to exhibit delinquent behavior, the more likely that behavior is to continue throughout life).

Cluster C: School Factors: Both the more (1) interpersonal difficulties and the more (2) academic difficulties the child has at school, the more likely he or she will later commit a crime.

To be sure, individual studies did report other factors to anticipate criminal behavior, but these, it seems to me, are the most persistent childhood correlates of adult criminal behavior.

How accurate, in terms of true and false positives, are these factors in predicting later crime and delinquency? Most studies don't report their data in this form, since they are really reports of "post-dictions" rather than predictions. They assessed children, then waited to see who later became criminal, and finally went back to see which of the childhood factors "would have" been useful as predictors. Farrington's (1979) Cambridge study, surely one of the best of the prediction studies, indicates that it would have been possible, at best, to identify a "high risk group" of children of whom approximately half would have been true positives and half false positive predictions of later crime. Two things need to be emphasized here: these are predictions of crime in general, and not of violent crime (predictions of violent crime would be much less accurate), and they are predictions among randomly chosen groups of children, not among children with extensive histories of involvement with the law (predictions of crime--of future arrest--among children with extensive criminal histories would be much more accurate).

III. Some Implications for Early Intervention Programs

Does the existing research provide sufficient information on the childhood predictors of adult crime to justify preemptive interventions? My answer would be in two parts: (1) the question is one of public policy--of weighing benefits and costs--rather than one of science; and (2) from my own public policy

perspective, the answer is: it depends on what early intervention programs one is talking about.

When a mental health professional or a sociologist or anyone else predicts that a child, unless he or she receives some form of intervention. "will" become a delinquent, he or she is really making three separable assertions (Monahan and Wexler 1978)

(a) The child has certain characteristics

(b) These characteristics are associated with a certain probability of the child's becoming criminal; and

(c) This probability is sufficiently high to justify preventive intervention. In other words, the decision-rule should be such that intervention occurs.

The first two of these assertions are scientific ones, whose truth or falsity can be established through research. It is possible to prove that a child does or does not have the characteristics claimed, and one can present data on their association with later crime.

The third assertion is of a different sort. It is not capable of scientific proof. It is a social policy statement that must be arrived at through the political process. This entails a weighing of the "costs" of the intervention to the "false positives"--the children who are erroneously predicted to need it-as well as the potential benefits of the intervention to the "true positives."

88-489 O—82——3

What are the "costs " of early intervention programs? The two most frequently given ones are "labeling effects," the effects on the child's self-concept of being directly or indirectly "labeled" as a "pre-delinquent," and the "widening of the net" of social control (Klein, 1979), allowing government broader authority to intervene in the lives of people (children, in this case) who have not been convicted of crime.

How "real" are these costs? That is, how likely are prevention programs to have harmful labeling effects, and to expand governmental power in insidious ways? Here, unfortunately there are not clear answers. Indeed, the existence and severity of labeling effects and net-widening are possibly the two most controversial issues in delinquency prevention today (Gove, 1980; Klein, 1979; Scull, 1979).

What are the "benefits" of delinquency prevention programs? Here, too, research offers little assistance. A large number of studies have found no differences between children exposed to prevention programs and those not exposed in terms of the reduction of future crime. (Berleman, Seaberg & Steinbrun, 1972; see, in general, White, Sechrest & Redner, in press). Yet there are some bright spots on the horizon (e.g., Rappaport, 1977).

So we are faced with these three facts:

(1) At best only half the children we identify as in need of early intervention programs are actually in such need.

(2) The negative effects of the intervention programs are unknown.

(3) The positive effects of intervention programs are also unknown, but in the past have tended to be minimal.

I do not think this means that we should throw up our hands and do nothing. There may be programs that could be devised that would not hurt the false positives and would help the true positives. The lesson to be derived from the research on delinquency prediction and delinquency prevention is not one of despair. But it is surely one of caution.

Senator SPECTER. Panel 2—Dr. Patterson, Dr. Farrington, Ms. Hamperian. Dr. Monahan was only speaking for himself when he said we do not know anything. Now for the panel.

All right. I have word from the Appropriations Committee that they are taking up the energy and water bill, which I must go to, but before moving there I know Dr. Farrington has limitations on time.

Let me start off by thanking all of you for coming. I would like to begin with the point of departure from Dr. Monahan to come right down to the central issue, and let's start with you, Dr. Farrington.

First of all, would you agree, disagree, or have an alternative viewpoint regarding when we ought to bring whatever resources we have to bear on the juvenile? Would you agree to the fourth offense, the fourth significant contact with the law?

STATEMENT OF DR. DAVID FARRINGTON, CAMBRIDGE UNIVERSITY INSTITUTE OF CRIMINOLOGY, FELLOW AT THE NATIONAL INSTITUTE OF JUSTICE, U.S. DEPARTMENT OF JUSTICE

Mr. FARRINGTON. I think the payoff would be greater if you attempted to have prevention programs rather than treatment programs, but if you are talking specifically about programs to treat existing offenders, then I think third, fourth, fifth, sixth—you could justify all of them in terms of a very high probability of future offending.

Senator SPECTER. When you talk about prevention you would like to start to work with the juvenile before he has three contacts with the law?

Mr. FARRINGTON. When I was talking of prevention I was really thinking in terms of the first few years of a person's life. I think once people get to be 15 or more and have three or more contacts

with the law, all of our experience suggests that it is extremely difficult to change them.

Senator SPECTER. What is the last point where we have a chance—12, 9, 5?

Mr. FARRINGTON. It's difficult to give an answer to that one, but I think the earlier the better from the point of view of having an impact on them.

Senator SPECTER. All right. You say beyond 15 it's too late. The difficulty we have is dealing with the limited number of resources to bring any significant preventive features to bear. Is there still time if we bring these resources to bear at the age of 12, in your opinion?

Mr. FARRINGTON. It's very difficult to answer that one. All I am saying is the older a person gets the harder it is to change them. This is assuming that you are interested in changing people rather than pure incapacitation, you know, keeping them out of the way.

Senator SPECTER. Let's start from the ideal side of it. At what point would you start on the prevention approach?

Mr. FARRINGTON. I think it would be worth trying some kind of prevention efforts in the first few years of a person's life. At birth you can predict, to some extent, who will become a delinquent from the fact that they have parents who are convicted, for example. You can predict with better than chance accuracy.

Senator SPECTER. Take the ideal system. At birth what would you do?

Mr. FARRINGTON. Well, you could do a number of things. Given that we know that delinquents tend to come from families with multiple adversities, what you could try to do is ameliorate some of those adversities in the first few years of a person's life. You could perhaps give economic help to the parents.

You could also, I think, try to train the parents in desirable methods of childrearing, given that all of our knowledge would suggest that the delinquents tend to come from parents with certain kinds of cold, harsh, erratic childrearing methods.

Senator SPECTER. Dr. Farrington, is that realistic to do, given the number of parents in that category and the difficulties of educating them and getting their cooperation, finding educators to do that?

Mr. FARRINGTON. In regard to parent training, I'm not sure, really. I think that it would be difficult to get their cooperation.

I think a more hopeful approach would be the one I was going to go on and mention, which would be to provide day-care facilities for the children. This would give them a more desirable environment than the one they are being brought up in, hopefully a more intellectually stimulating environment and one in which the parent substitutes would be providing the loving approach and the consistent supervision, et cetera, which they are not getting.

Senator SPECTER. How many children would we be dealing with if we want to change their early environment with day-care centers?

Mr. FARRINGTON. Well, you would want to deal with the children who are in the families at the bottom of the pile. You want to deal with the families with multiple adversities because that is where, disproportionately, criminals and delinquents come from.

Senator SPECTER. But you are talking about tremendous numbers there, are you not?

Mr. FARRINGTON. Yes.

Senator SPECTER. What is the reality of funding that kind of a program? Maybe that is a better question for me to answer than for you to answer.

Mr. FARRINGTON. Any such program clearly should be preceded by research. What I am really suggesting is a research project to see if this would have any effect. I don't think you should embark upon spending millions and millions of dollars on massive social programs without preceding them by research.

But I think in terms——

Senator SPECTER. What would your estimate be as to the time to complete such a research program? I have only a 6-year term? [Laughter.]

Mr. FARRINGTON. Obviously, in an ideal world which, as you remember, you asked me to assume, it would have to be a research program which would have to go on for 10 years to detect any effect on the children.

Senator SPECTER. Let's conclude today that we will consider that, but we cannot wait.

Mr. FARRINGTON. All right.

Senator SPECTER. What can we do based upon what we know today?

Mr. FARRINGTON. In terms of changing people, I think based upon what we know today it's very difficult to do very much because almost everything we have tried doesn't seem to have been very successful.

Senator SPECTER. Suppose we deal with a 9-year-old who has had three significant contacts with the law, so we have narrowed the field. What would your estimate be as to, No. 1, identifying someone? Wouldn't it be fair to say if a 9-year-old has had three contacts with the law that that person is a high likelihood candidate for becoming a career criminal?

Mr. FARRINGTON. It depends upon what you mean by a "career criminal."

Senator SPECTER. I define a career criminal as someone who engages in a pattern of robberies and burglaries throughout the course of his life.

Mr. FARRINGTON. Well, they wouldn't——

Senator SPECTER. That is the group I would seek to deal with. My own sense of the crime problem in this country is that robbery and burglary are the two most serious offenses. Rape is an enormously serious offense, arson is an enormously serious offense, so are homicides, drug sales, and kidnaping, but those involve very different considerations, rape having a lot of psychiatric overtones and homicide being committed 70 percent of the time in friendly or family circumstances, arson being a different breed of cat, and drug sales different.

The core of the street crime in this country involves robberies and burglaries and there are career criminals who have committed dozens of robberies and burglaries and the highest priority item, in my judgment, is to start with those career criminals.

What I am seeking to do in these hearings is to identify at the earliest stage possible, consistent with an allocation of modest resources, who is most likely to move into the career-criminal category. So I move along in the interest of time, and ask you the question as to the 9-year-old with three contacts with the law. Is it too late to do much with that individual?

Mr. FARRINGTON. I suppose the answer should be no in terms of my gut reaction, but in terms of what has been tried so far, we haven't been very successful.

Senator SPECTER. Well, from what has been tried so far, what would the best approach be, realizing there are no absolutes. Postulate a 9-year-old coming from the bad circumstances which have been described by Dr. Monahan and assume an ideal situation where you have any resources that you want to bring to bear on this 9-year-old. What would you do with the child?

Mr. FARRINGTON. I think what I would advocate would be trying to change the pattern of family interactions and the family circumstances of that child. I would not advocate sending the child at that age to an institution. I think that should be the last possible resort and I think the most hopeful approach would be to go to the families.

You see, what you would be likely to find in that case would be that the parents would be dealing with the child in a very erratic and unusual way and it should be possible to go into that family and to try to encourage the parents to change their patterns of interactions with the child in a more desirable way.

Senator SPECTER. How would you do that—family counseling?

Mr. FARRINGTON. Well, yes, I suppose so.

Senator SPECTER. What else?

Mr. FARRINGTON. In some way you have to encourage the parents to participate because in all of these examples the parents who most need this treatment are the most resistant to it, generally.

Senator SPECTER. What inducements would you suggest?

One we used in Philadelphia was to condition probation or release from custody on the family unit coming in several evenings a week and sitting down and talking with psychological counselors.

Is that useful?

Mr. FARRINGTON. I don't know that talking would be very effective. I think it would have to be a more active participation in the family, more active modeling so that the parents could be taught in a more active way. I think just talking might not be very effective, at least on the basis of previous research.

But if you could get a counselor to go in with the family and live with them or be with them a while, that might be more effective.

[The prepared statement of Mr. Farrington follows:]

Prepared Statement of David P. Farrington

(Institute of Criminology, Cambridge University; currently Visiting Fellow, National Institute of Justice)

The Cambridge Study in Delinquent Development

I would like to discuss the extent to which delinquency can be predicted by referring to a survey on which I have worked for a number of years, the Cambridge Study in Delinquent Development. The present paper is as non-technical as possible. The detailed, technical results of the survey can be found in 3 books and about 50 articles which have been published.

The main aim of this survey was to investigate the precursors and correlates of delinquency among English males. The survey began in 1961, when most of the boys were aged 8, and continued until 1980, when every one of them was aged at least 25. It was directed throughout by Professor Donald West, now Director of the Cambridge University Institute of Criminology, and during the major period of analysis and reporting I was equally responsible with him for the conduct of the research. I am still working on data collected in this survey during my Visiting Fellowship at the National Institute of Justice, and some of the results quoted have been obtained very recently and may yet be modified or expanded upon.

The 411 males in the study were first contacted in 1961-62 when they were aged 8-9. At that time, they were all living in a working class area of London, England. The vast majority of the sample was chosen by taking all the boys aged 8-9 who were on the registers of six state primary schools which were within a one-mile radius of a research office which had been established. In addition, 12 boys were included from a local school for the educationally

subnormal, in an attempt to make the sample more representative of the population of boys living in the area. The intention was to include about 400 boys in the study. The sample size, while limited by staffing and budgetary considerations, was intended to be large enough to permit statistical comparisons between convicted and unconvicted youths, yet small enough to permit individual interviews and detailed case studies.

The boys were almost all white in appearance. Only 12, most of whom had at least one parent of West Indian origin, were black. More than 90 percent were being brought up by parents who had themselves been reared in the United Kingdom or the Irish Republic. On the basis of their fathers' occupations, about 94 percent could be described as working class, in comparison with the national figure of 78 percent at that time. Therefore, this was overwhelmingly an urban, white, working class sample of traditional British origin.

Sources of Data

The boys were tested in their schools when they were aged about 8, 10, and 14, and they were interviewed in the research office at about 16 and 18. In addition, subsamples were interviewed at ages 21 and 24. Up to and including age 21, it was always possible to trace and interview a high proportion of the sample. At age 18, 10 years after the study had begun, 95 percent of the original 411 boys were interviewed. Of the 22 youths missing at this age, only one had died, only one could not be traced, 6 were abroad, 10 refused to be interviewed, and in the other 4 cases the parent refused on behalf of the youth.

At age 21, the aim was to interview only the convicted delinquents and a similarly sized randomly chosen sample of non-delinquents, rather than all the youths. More than

90 percent of the target group of 241 were interviewed. At age 24, the aim was to interview four subgroups of youths: continuing delinquents, "reformed" delinquents, a group from seriously deprived backgrounds, and a random sample of unconvicted youths. Only about 75 percent of the target sample of 113 were interviewed, primarily because so many of these youths had left home and were difficult to trace at this age.

In addition to the interviews and tests with the boys, interviews with their parents were carried out by female social workers who visited their homes. These took place about once a year from when the boy was aged 8 until when he was about 14-15 and in his last year of compulsory schooling. The primary informant was the mother, although the father was also seen in the majority of cases. The boys' teachers also filled in questionnaires about their behavior in school, when the boys were aged about 8, 10, 12, and 14.

It was also possible to make repeated searches in the central Criminal Record Office in London to try to locate findings of guilt sustained by the boys, by their parents, by their brothers and sisters, and (in recent years) by their wives. These searches continued until March 1980, when the youngest boy was aged 25 years 6 months. The criminal records of the boys are believed to be complete from the tenth birthday (the minimum age of criminal responsibility in England and Wales) to the twenty-fifth birthday. In addition to the official records, admissions of delinquent acts which had not necessarily led to convictions were obtained from the youths at ages 14, 16, 18, 21, and 24.

Conviction Careers

Almost exactly one-third of the boys (136) were found

guilty in court for a criminal offense (defined here as an offense routinely recorded in the Criminal Record Office) committed between their tenth and twenty-fifth birthdays. The majority of these offenses were thefts, burglaries or unauthorized takings of motor vehicles, and most were committed with one or two other persons, usually boys of similar age. Perhaps the most serious criminal was the youth who carried out two robberies using guns, stealing more than $65,000. He was given 5 1/2 years imprisonment for one, consecutive to a previous sentence of 21 months imprisonment for burgling a farmhouse, and 7 years concurrent for the other. All three offenses were committed when he was aged 24. His first conviction was at age 15, also for robbery, for which he received a discharge.

Table 1

Ages at which Offenses were Committed which Led to Convictions

Age	Number of First Convictions	Number of Different Boys Convicted	Number of Convictions
10	6	6	7
11	6	8	10
12	8	12	14
13	15	21	27
14	19	34	44
15	17	33	43
16	13	32	47
17	19	47	63
18	8	41	50
19	8	38	47
20	9	29	41
21	2	18	20
22	2	24	33
23	2	11	11
24	2	13	18
Total	136		475

Table 1 shows the number of first convictions, the number of different boys convicted, and the number of convictions at each age. It can be seen that the number of youths first convicted declined dramatically after the twenty-first birthday. The period from the tenth to the twenty-fifth birthday spans four legal categories in England and Wales: children (tenth to just before fourteenth birthday), young persons (fourteenth to just before seventeenth birthday), young adults (seventeenth to just before twenty-first birthday) and adults (twenty-first birthday onwards). Children and young persons together are juveniles. It can be seen that 35 boys were first convicted as children, 49 as young persons (making 84 altogether as juveniles), 44 as young adults, and only 8 as adults.

The peak age for the number of different youths convicted (47) and for the number of convictions (63) was 17. By age 24, these figures had fallen to only about a quarter of their peak values (13 boys convicted, 18 convictions). The peak period of convictions for this sample was from 14 to 20, with at least 40 convictions (10 per 100 boys) at each age.

The likelihood of a convicted person being convicted again tended to increase with his number of convictions. While 33 percent of the sample were convicted, 62 percent of those with one conviction were convicted again. For those with 2-5 convictions, 70-75 percent were convicted again, and for those with 6-10 convictions 78-92 percent were convicted again. For example, of 12 boys who received 10 convictions, 11 (92 percent) went on to receive an eleventh conviction. The numbers were too small to continue with this analysis after this point.

A small number of boys were responsible for a large number of convictions. The 23 boys with 6 or more convictions (5.6 percent of the sample) accounted

for 230 of the 475 convictions (48.4 percent) - an average of 10 each. The same phenomenon had been seen in an earlier analysis in which the boys' convictions had been added to those of their fathers, mothers, brothers and sisters. A minority of 18 families (4.6 percent) accounted for 581 of the total number of convictions (47.7 percent).

There was a close relationship between juvenile (age 10-16) and adult (age 17-24) convictions. For the purposes of this analysis, the 5 boys who were known to have died up to age 25 (all convicted, incidentally), and the 11 who had emigrated, were eliminated. Over three-quarters of those with 4 or more juvenile convictions also had 4 or more adult convictions (10 out of 13, or 77 percent). This was true of only 2 percent of those with no juvenile convictions (7 out of 317), 14 percent of those with one juvenile conviction (6 out of 44), and 29 percent of those with 2-3 juvenile convictions (6 out of 21). The average number of adult convictions increased from those with no juvenile convictions (0.29) to 1 juvenile conviction (1.45) to 2-3 juvenile convictions (2.76) and to 4 or more juvenile convictions (average 4.85 adult convictions). While the analyses have not yet been completed, it seems likely that the number of juvenile convictions will prove to be the best predictor of the number of adult convictions.

Predicting Juvenile Delinquency

As many factors as possible were measured before the boys were 10 and could be found guilty in court. These could be genuinely predictive of juvenile convictions, unbiased by the knowledge of who became delinquent. As already mentioned, about 20 percent of the boys (84) became convicted juvenile delinquents, and they differed significantly from the unconvicted majority on many of the factors measured

before age 10. The best single predictor of juvenile delinquency was troublesome behavior in the primary school, as rated by teachers and peers. On this and other factors, the boys were divided into approximate quarters, as far as possible.

Of the 92 boys rated most troublesome, 44.6 percent were convicted as juveniles, in comparison with only 3.5 percent of the 143 least troublesome boys. Turning the percentages round, 48.8 percent of the juvenile delinquents had been rated in the most troublesome group in their primary schools. The fact that troublesomeness was the best predictor of delinquency is not really surprising, in view of the continuity of behavior. The boys who were violating the rules of the primary school at age 8-10 tended to go on violating rules outside school between ages 10 and 16. Of course, the amount of error in this prediction should not be forgotten. A little less than half of the troublesome boys became juvenile delinquents, and a little less than half of the juvenile delinquents had been rated troublesome.

Five other factors which were not measures of bad behavior were important predictors of juvenile convictions. The delinquents tended to come from poorer families, larger sized families, those with convicted parents, those suffering poor parental behavior (that is, cruel, passive or neglecting attitudes, erratic or harsh discipline, and parental disharmony), and tended to have low IQs. Once again, the accuracy of each prediction was not impressive, although all the relationships were statistically highly significant. For example, one third of the 93 boys from the poorest families became delinquents, in comparison with one sixth of the remainder. In other words, although the poorest boys were proportionally twice as likely to be con-

victed as the remainder, two thirds of the poorest boys were not convicted as juveniles.

It might be thought that the accuracy of delinquency prediction could be improved by combining the above five factors. This would be a retrospective exercise done with the benefit of hindsight, and therefore it would tend to overestimate the true degree of predictability. The exercise was done very simply, by identifying the 63 boys with at least three of the five background adversities. Almost exactly half of these (31) became juvenile delinquents, which was little improvement on troublesomeness alone. Furthermore, a combination of troublesomeness and the five background factors also was no better as a predictor than troublesomeness alone.

The use of more sophisticated methods of selecting and combining predictor variables also indicated that the limit of predictability with these data was reached in identifying a vulnerable group of whom half became delinquents, in turn containing half of the delinquents. This limit probably reflects the importance of later factors in causing delinquency, the extent to which findings of guilt in court depend on essentially random or unpredictable factors, and the impossibility of accurately measuring the predictive factors.

Many other factors measured before age 10 predicted juvenile convictions to a statistically significant degree. The delinquents tended to come from families living in poor houses with neglected interiors, supported by social agencies, physically neglecting their children, and uncooperative towards the research. They tended to come from those born illegitimate, and from those who had experienced broken homes or separations from their parents for reasons other than

death or hospitalization. They tended to be drawn from those whose parents were uninterested in education, who were lax in enforcing rules or under-vigilant, or who tended to endorse authoritarian child-rearing attitudes on questionnaires. Their mothers tended to be nervous and in poor physical health, while their fathers tended to have erratic job histories. Some of the negative results were also of interest. For example, the juvenile delinquents did not tend to have working mothers.

The above predictive factors were less important than the five background factors which I mentioned first of all. For example, the boys who had been separated from their parents tended also to be those who had convicted parents. Separations did not predict juvenile delinquency over and above convicted parents, whereas convicted parents did predict juvenile delinquency independently of separations. These results suggested that separations appeared to predict juvenile delinquency primarily because this factor was associated with the more important factor of convicted parents.

"Self-Reported" Juvenile Delinquents

All the preceding results apply to the officially convicted juvenile delinquents. Self-report and victim surveys indicate that the official records are very much the tip of the iceberg of offending. As an alternative measure of juvenile delinquency, the boys were given a self-reported delinquency questionnaire at ages 14 and 16. In this, they were asked to say whether they had committed each of 38 delinquent or fringe-delinquent acts. As a measure of self-reported juvenile delinquency, each boy was scored according to the total number of different acts he admitted at either or both ages. The validity of these scores was confirmed by the fact that they significantly predicted future convictions among unconvicted boys.

For ease of comparison with the 84 official juvenile delinquents, the 80 boys with the highest self-report scores, all of whom admitted at least 21 acts, were grouped together and called the self-reported juvenile delinquents. The overlap between the two categories was very marked, amounting to about 50 percent (41 boys). This suggests that, to a large extent, the boys who sustained findings of guilt as juveniles tended to be those who committed the most offenses. While the official records may be a poor measure of the overall incidence of offending, they do seem to be useful in separating out the more and less frequent (and serious) offenders.

No doubt at least partly because of the overlap between the two groups, the factors which predicted official juvenile delinquency tended also to predict self-reported juvenile delinquency. The self-reported delinquents tended to be rated troublesome in their primary schools, tended to come from poor, large-sized families, suffered poor parental behavior, had convicted parents, and had low IQs. All these factors were especially common among the group of boys who were both official and self-reported delinquents. For example, 61 percent of this group had convicted parents, in comparison with 30 percent of those who were official but not self-reported delinquents, 26 percent of those who were self-reported but not offical delinquents, and 20 percent of the majority who were neither.

Criminal Behavior by Young Adults

The majority of boys, 51 out of 95, who were convicted as young adults (between their seventeenth and twenty-first birthdays) had previously been convicted as juveniles. Therefore, it was no surprise to find that troublesomeness and the five background factors significantly predicted young adult convictions. However, when it came to predicting those

convicted for the first time as young adults, low IQ and poor parental child-rearing behavior at age 8-10 were no longer predictive. Later measures of low IQ, at age 14, and of some of the elements of poor parental behavior (notably, parental disharmony), did predict these "late-comers to crime." The other measures at age 8-10 (troublesomeness, low family income, large family size, and convicted parents) predicted first convictions as young adults, although those first convicted as young adults generally came from less adverse backgrounds than the juvenile delinquents. For example, 45 percent of convicted juveniles had a convicted parent by age 10, but only 36 percent of those first convicted as young adults.

On the basis of the interviews at age 18-19, it seemed that criminal behavior was only one element of a socially deviant life style. In comparison with the remainder, the young adult delinquents tended to be heavy drinkers, heavy smokers, and heavy gamblers. They were more likely to have been found guilty of minor motoring offenses, to have driven after drinking at least 5 pints of beer, and to have taken prohibited drugs such as cannabis or LSD. They were more likely to have had frequent sexual intercourse, especially with a variety of different girls, and to spend time hanging about on the streets. The young adult delinquents changed jobs more frequently, and tended to hold relatively well paid but low status jobs. They were also more likely to be involved in group violence and vandalism, and to agree with aggressive and anti-establishment attitude statements in a questionnaire.

A measure of self-reported delinquency at age 18-19 was obtained by asking the youths how often they had committed each of seven specified criminal activities in

88-489 O—82——4

the previous three years, namely damaging property, taking and driving away motor vehicles, receiving stolen property, burglary, shoplifting, stealing from slot machines, and stealing from parked cars. As before, about half of those who were the most delinquent according to their own admissions were convicted, and the self-reported delinquents shared many of the features of the official delinquents.

Predicting Criminal Violence

The prevalence of convictions for violence in this sample was, of course, much less than the prevalence of convictions in general. For example, up to age 21, only 6.6 percent had been convicted for violence, out of the total of over 30 percent convicted of criminal offenses. The criteria for inclusion in the officially violent group were strict. A youth was only included if he was convicted of an offense that must have involved violence against another person (such as causing actual bodily harm), or if a police report stated that he had used, or threatened to use, physical violence against another person during the commission of an offense. Robberies that involved mere jostling or snatching were not counted, and neither was possessing an offensive weapon without actually using it or threatening to do so.

Because of the small number of people involved, it is obviously harder to predict convictions for criminal violence than convictions in general. Nevertheless, convictions for criminal violence could be predicted to a statistically significant degree by teachers' ratings of aggressive behavior in class at age 8-10. Of the quarter of the sample who were the most aggressive, 14 percent became violent delinquents, in comparison with 4.5 percent of the remaining three-quarters. This prediction had a very high false positive

rate of 86 percent. However, turning the percentages round, nearly half of the violent delinquents (48 percent) had been rated aggressive as children, in comparison with only about one fifth (21 percent) of those who did not become violent delinquents.

It might be argued that what should be predicted is not convictions for violence but violent behavior, and that the behavior is more common than the convictions. Self-reports of violent behavior were obtained in the present research by inquiring about involvement in fights, starting fights, carrying weapons, and using weapons in fights. The teachers' ratings of aggressive behavior at 8-10 significantly predicted self-reports of violence at 16-18, with 40 percent of the most aggressive quarter at 8-10 being in the most violent quarter at 16-18. The false positive rate is lower in this kind of comparison.

Other factors also predicted criminal violence. At age 8-10, the violent delinquents tended to have parents who were cold, harsh, disharmonious, convicted, and poor supervisors. They also tended to have low IQs and to be rated daring by parents and classmates. Each of these factors predicted criminal violence independently of each other factor. Harsh parental attitude and discipline was the best predictor of convictions for violence, being an even better predictor than teachers' ratings of aggressive behavior in school. The same factors predicted youths who were high on self-reported violence at age 16-18.

Predicting the End of Delinquency Careers

While in the earlier part of this research the emphasis was on predicting the onset of delinquency careers, the emphasis in later years has been on predicting their end.

Most of these analyses have been based on comparisons between "temporary recidivists" (those with at least 2 convictions up to the nineteenth birthday and no more in the next 5 years) and "persisting recidivists" (those with at least 2 convictions up to the nineteenth birthday and at least one more in the next 5 years). The temporary recidivists were less deviant than the persisting recidivists when interviewed at ages 21 and 24. For example, the temporary recidivists were less likely to be unemployed, to be heavy drinkers, to be living with a woman but not married to her, to be living in poor housing conditions, and (in the previous two years) to have convictions for motoring offenses, to have taken prohibited drugs, and to have been involved in fights.

As might have been expected, the recidivists who persisted in their delinquency careers tended to have more prior convictions than those who ceased. More than half of the persisting recidivists (54 percent) had four or more convictions up to the nineteenth birthday, in comparison with only 19 percent of the temporary recidivists. This was another example of the prediction of future conviction record from past conviction record. However, over and above the number of previous convictions, the persisting recidivists were more likely to come from large, low income families and to have a convicted parent at age 10. These early factors of poverty, family size, and parental convictions predicted not only the onset of delinquency but also its ending.

Another predictor of the persistence of delinquency, which was as effective as the number of previous convictions, was the measure of "antisociality" or deviant life style at age 18-19. This was a combination of factors such as sexual promiscuity, driving after drinking, heavy smoking, heavy

gambling, drug use, anti-establishment attitudes, aggressive behavior, and an unstable job record.

Conclusions of the Research

The Cambridge Study in Delinquent Development shows how a constellation of adverse family background factors (including poverty, large families, parental disharmony, and ineffective child rearing methods), among which parental criminality is likely to be one element, leads to a constellation of socially deviant features in late adolescence and early adulthood (including drinking, gambling, drug use, reckless driving, sexual promiscuity, and aggression), among which criminal offending is again likely to be one element. It seems likely that the convicted youths in our sample will tend to recreate for their own children the same undesirable family environments, thus perpetuating from one generation to the next a range of social problems of which delinquency is only one element.

Does this English research have any relevance for the United States? I would submit that it does. In studying the development of delinquency, the United States has three outstandingly brilliant researchers who have greatly advanced our knowledge - Joan McCord (of Drexel University, Philadelphia), Lee Robins (of Washington University, St. Louis), and Marvin Wolfgang (of the University of Pennsylvania, Philadelphia). I think that anyone who compares their results with our English conclusions must be struck by the many similarities.

For example, Marvin Wolfgang has reported that 6 percent of his boys were responsible for 52 percent of all the arrests, and that the probability of one arrest following another increased steeply, from 35 percent for a first arrest to between 70 and 80 percent for arrests following the third. Lee Robins has shown how delinquency is one element of a larger

syndrome of "antisocial personality" which begins in childhood and continues into adulthood. As children, her antisocial group tended to steal, truant and run away from home, and to be aggressive, enuretic, disciplinary problems in school, pathological liars, and so on. As adults, they tended to be arrested, divorced, placed in mental hospitals, alcoholics, sexually promiscuous, vagrants, bad debtors, poor workers, and so on. Joan McCord has shown how parents with cruel, passive or neglecting attitudes, or erratic or lax discipline, tend to have delinquent children.

Implications for Delinquency Prevention

Our research shows that, at least to a statistically significant extent, convictions and delinquent behavior can be predicted. What can be done to prevent them? Any attempt to prevent delinquency should be based on a theory about why people commit delinquent acts. Many factors have been proposed as causes of delinquency, including heredity, early environment and upbringing, personality, socio-economic and demographic status, current living circumstances, perceptual and motivational processes of the person, and the temptations of the immediate situation. One of the best available theories of delinquency at the present time is that put forward by Travis Hirschi (of the University of Arizona, Tucson), and I am happy to report that most of our results are in conformity with it.

Our research places most emphasis on early environment and upbringing. The educationally retarded children from large, poor, criminal families are especially at risk of committing criminal and delinquent acts. Even at the cost of taking a little away from the more fortunate members of the society, scarce welfare resources should be concentrated on this high risk group. In my opinion, the earlier the intervention the

better. Current attempts to prevent and treat delinquency occur much too late in an individual's life. If delinquency is part of a larger syndrome beginning in childhood and continuing into adulthood, interventions in the first few years of life are most likely to be successful. Even before the children are born, we can identify people with a high risk of having delinquent children, such as men with convictions, especially if they get married to women with convictions. What is needed is special help and support for these people and their children in their first few years of life.

What options are there for the criminal justice system? There are many aims of sentencing, including individual and general deterrence, rehabilitation, incapacitation, preventing unofficial retaliation, retribution, denunciation, and reparation. Our research has some implications for deterrence and incapacitation.

General deterrence is based on the theory that crimes are committed rationally, with individuals weighing the likely costs against the likely gains. Our research indicated that there is some truth in this theory, at least for the majority of offenses. When we asked our youths why they committed offenses, the most common category of reasons given (60 percent) were rational ones. By and large, it seemed that the youths stole and burgled purposefully, for the material gains involved. The next most common category (20 percent) were motives of excitement or enjoyment. Offenses of damaging property and taking motor vehicles were particularly likely to be done for enjoyment, whereas rational motives predominated in all other cases. To the extent that crimes are committed rationally, it should be possible to deter people from committing them by increasing the probability of apprehension and/or the severity of penalties.

We also tried to investigate the individual deterrent effect of convictions on the subsequent delinquent behavior of the convicted people. This analysis was limited to first convictions. If a first conviction has an individual deterrent effect (or a reformative effect for that matter), then it might be expected that a youth's delinquent behavior would decrease after he was convicted. On the other hand, it is possible that first convictions might have undesirable (stigmatizing and contaminating) effects which propelled youths into more delinquent behavior than before. As measures of delinquent behavior, we used our self-reported delinquency scores at ages 14 and 18. We found that the 53 youths first found guilty in court between 14 and 18 had significantly increased delinquency by the later age, in comparison with unconvicted youths matched at 14. All the evidence suggested that first convictions were followed by a worsening of delinquent behavior.

We then investigated whether first convictions between 18 and 21 had the same effect, and found that they had. In this case, we also studied the effect of the different disposals given in court. Most first convictions were followed by a discharge or a fine. We found that those who were discharged had significantly increased delinquency, whereas those who were fined did not. This result is based on small numbers. If it is taken seriously, it is difficult to reconcile with an explanation of increased delinquency based on stigmatization or labelling, since a discharge should have the least stigmatizing effect of any disposal. It seems more plausible to suggest that court appearances followed by discharges led to a decrease in deterrence. In other words, those who went to court and had nothing happen to them may have become less afraid of a court appearance than they were

before, and therefore more likely to commit delinquent acts. Court appearances followed by discharges may be worse than no court appearance at all.

The final analysis which I will mention here attempted to investigate the value of incapacitation as a penal policy. During the interviews at age 18-19, the youths were asked how many of certain specified kinds of crimes they had committed in the previous 3 years (as described earlier). The 389 boys interviewed reported a total of 342 burglaries. During this 3 year period, 28 of the boys (7.2 percent) had been convicted of a total of 35 offenses of burglary, indicating that the probability of a burglary leading to a conviction was about 10 percent. These 28 convicted boys reported committing 136 burglaries, or about 40 percent of the total admitted. They also reported 223 acts of damaging property (36 percent of the total admitted), 200 of stealing from meters, telephone booths, etc (36 percent), 111 of stealing from vehicles (24 percent), 88 of taking and driving away vehicles (21 percent), and 194 of shoplifting (16 percent).

What if there had been a mandatory sentence of 3 years incarceration for every convicted burglar aged 15 1/2 - 18 1/2? Without going into all the assumptions and complications (which do not really affect the argument), it is not unreasonable to suppose that this policy might have led to a 40 percent reduction in the total number of burglaries, and to substantial reductions in other categories of crime.

Superficially, such a sentencing policy might seem attractive. However, it involves such an enormous increase in institutionalization that it is quite impractical. Of the 28 youths convicted of burglary, only 7 actually were given institutional sentences for it. Of the remainder, 9 received probation, 6 received a fine, and 6 were given a discharge.

Of the 7 institutionalized youths, 4 were sent to a detention center, which would have involved 2 months incarceration each. The other 3 (two going to borstal and one to a training school) probably were each incarcerated for about 9 months. The total incarceration actually experienced by these 28 burglars, then, would have been about 35 months. To incarcerate all 28 for 3 years each would mean increasing the incarceration rate by a factor approaching 30.

Let us be a little more realistic and investigate what would be the effect of doubling the incarceration rate for burglary (the number of boy-years served) from 3 to 6. Each boy convicted of burglary reported committing an average of about 1.6 burglaries per year. Doubling the incarceration rate for burglary might therefore have prevented 5 of the total number of 342 burglaries reported - about 1 1/2 percent. To my mind, the benefits of incapacitation for burglary are not worth the costs, and I think a similar conclusion would follow for most crimes.

To conclude, I think our best hope of reducing delinquency is to intervene early in the lives of high risk groups.

Senator SPECTER. My chief counsel, Bruce Cohen, tells me that is the thrust of your work, Dr. Patterson.

Mr. PATTERSON. [Nods affirmatively.]

Senator SPECTER. Is that the chief thrust of your work?

Mr. PATTERSON. Yes.

Senator SPECTER. Would you care to supplement at this point?

Mr. PATTERSON. I have a hunch that what I thought I was going to talk about I am not, so I'll just follow your questions.

Senator SPECTER. I will give you an opportunity later to talk about whatever you chose to talk about. I am operating under a constricted schedule. Specifically, my problem at this moment is that as of 10:30 the energy and water bill is up, which will last for half an hour and I have to propose an amendment on the Appalachian Regional Commission and Three Mile Island in order to discharge my duties to my State and I have got Dr. Patterson, who has to go soon, and I am trying to get to the core of what is on my mind.

You will forgive me if I put it first. I will later come to what is on your mind, what you prepared to say, but if you could pick up

on the thread at this point, dealing hypothetically with this 9-year-old who has had three contacts with the law, we are talking about some interaction with the family. What would your best judgment be as to what can be done?

Mr. PATTERSON. If I could have a 20-second lead-in, please.

Senator SPECTER. Sure.

STATEMENT OF GERALD R. PATTERSON, RESEARCH SCIENTIST, OREGON SOCIAL LEARNING CENTER, EUGENE, OREG.

Mr. PATTERSON. For the past 15 years we have studied and treated 200 families of antisocial children and then 200 normal families more recently. And for each family we have about 10,000 pieces of information, including observations in the home of what these people do.

In our experience in working with these cases—and I would address the question you directed to me as to where we would start—the last 2 years of our efforts to treat chronic delinquents by training the parents to manage their own families has been a statistical success, but, practically speaking, that is not the way to go.

By the time you have an adolescent chronic offender, he costs too much to even treat on a community basis with the very best technology we could bring to bear on these questions. But our earlier experience would suggest that we should go back to earlier. In fact, I think you can go back before the age of 9.

Now this takes one additional idea, and that is that before a child becomes a police offender there is a history of activity that we can call "protodelinquent," if you like, where the 6-, 7-, 8-, and 9-year-olds are doing things that are sort of practicing to be official delinquents.

Then the question is can you find some way of measuring this protodelinquent buildup that will lead to the first offense, the second, third, and fourth offense. And some of our work would suggest that indeed that is possible and the kind of things that we are doing is sampling across agents in the community so that you get reports not just from the moms and dads but the mother, father, teacher, peers, and observers in the home and all kind of community agent resources that you have to give an overlapping view of how that child is coming in this protodelinquent buildup.

Now let me give you one fact and then I will stop to see if this is where you want to go.

We treated 50 protodelinquent incompetent thieves who were 8 years of age.

Senator SPECTER. Did you say thieves?

Mr. PATTERSON. Thieves. These are young children who got caught at least twice a month, according to somebody's information. We trained their parents on managing their own child and then followed them up to see what happened.

Well, for 6 months the stealing stopped and then we withdraw completely and these families were on their own in the community. By the time they were 14 the family—the parents, who pulled out all the controls again and allowed the child to continue moving from protodelinquent to delinquent to chronic, 57 percent of those children are now chronic.

Remember, we saw them at age 8, when they were just practicing. By the time they are 14, 57 percent were chronic offenders. Now that suggests there is a continuity very early on that leads to the kinds of things we are interested in.

It's another question as to whether you can build in a prevention treatment that will catch this protopattern and break it up.

As I just acknowledged, what we did had a short-term effect. It was very significant clinically and statistically, but it's not good enough.

Senator SPECTER. What did you do that was so effective?

Mr. PATTERSON. Two things. One is, these people do not like to talk to psychologists. They are not interested in tracking and monitoring and punishing their children. We pay them a salary. It's the American way.

If they did exactly what we told them to do in being a good parent, they got $10 a week, and if they screwed up they lost money. So the salary got them to control the child so the stealing and the other antisocial behaviors dropped. But then we pulled the salary out and the parenting behavior stopped.

Senator SPECTER. What did the parent do to achieve the result?

Mr. PATTERSON. We came across four variables in our clinical work with these 200 families that fit very well with the research done by Farrington all the way back to the Gluecks.

Our names for these variables are slightly different. No. 1 is to teach these parents to try to monitor their kids—where are they when they don't come home from school, who are they with, what are they doing, when are they coming back? No. 1.

Senator SPECTER. And you judge their lack of success if the children got back into the stealing?

Mr. PATTERSON. That's right, and the amount of monitoring, we call this variable, relates very highly to the amount of stealing you are getting out in the community. And, again, we are using overlapping reports from different community agents to define what we mean by monitoring—it's not just the mother's report from our interview—just as we use overlapping to define what we mean by stealing.

Senator SPECTER. What are some of the indicia?

Mr. PATTERSON. I'm sorry?

Senator SPECTER. What are some of the indicators of monitoring?

Mr. PATTERSON. Do you have house rules as to when he is supposed to come in off the street and then to ask the mother and father and child about the same rules. To the extent they agree then we have a monitoring score.

Senator SPECTER. Are there any monitors outside the family unit themselves?

Mr. PATTERSON. No. We have one more measure that is interesting. We call the child and the mother or father each day and ask the monitoring questions. In the last 24 hours how much street time did they know where you were, who you were with, and then ask the parents the same thing.

The discrepancy is a part of the monitoring.

Senator SPECTER. Before they can get together to unify the approach?

Mr. PATTERSON. That's right.

Senator SPECTER. When you say 8-year-old thieves, how do you classify them as thieves in terms of what they have done? Purse-snatching?

Mr. PATTERSON. No; 50 percent of the stealing of young stealers are in the family itself. They are little things like taking money from the mother's purse without asking, taking siblings' things and/or ripping off a neighbor, stealing from a store, stealing the petty cash fund from the school, money out of the teacher's purse, and that kind of thing.

These are young kids. They are not officially delinquent.

Senator SPECTER. They do not break and enter someone's dwelling?

Mr. PATTERSON. That's right. Most of these young children do not.

Senator SPECTER. It's property they have access to as a result of where they have a right to be—in a neighbor's home, school, or their own home.

Mr. PATTERSON. It's things that normal kids do, but these kids are doing it with a higher density.

Senator SPECTER. How do you identify them? What calls them to your attention? They are not arrested.

Mr. PATTERSON. No, sir. These people are referred to us by community agencies because the children are not only stealing but engaged in other problems too.

Senator SPECTER. Did you work with any who had come to your attention as a result of being arrested?

Mr. PATTERSON. Yes.

Senator SPECTER. Many?

Mr. PATTERSON. Well, in our first 10 years we worked with 150 cases. Thirty or forty percent came to us with police arrests before the age of 12.

Senator SPECTER. And what has your experience been regarding how many of those under 12 had multiple arrests—as many as three or four arrests? Very many?

Mr. PATTERSON. My guess is it would be very few, maybe 10 percent, 20 percent at the most, of that younger group.

Senator SPECTER. If we would be looking to 9-year-olds who have three contacts with the law, would we be defining a very small group?

Mr. PATTERSON. Yes. I do not think that would be efficient. I think we should have screening devices that could be provided by community agents to identify kids who are practicing to be the career offenders we are concerned about.

Could I go back for just a moment? You asked me what we trained these parents to do and I mentioned monitoring. I would like to add one more thing, if I might.

It's the parents of extremely antisocial children—and I am not just talking about stealers, but fighters and assaulters now—most of them do not know very much about what their children are doing and, second, even if they see the child perform an antisocial act, such as assault of another family member or that kind of thing, they do not punish these behaviors.

One of the main treatment procedures that we have come to learn in the last 15 years is training parents to use sane punishment.

Senator SPECTER. What kind of punishments? Sane?

Mr. PATTERSON. Sane.

Senator SPECTER. How do you define that?

Mr. PATTERSON. These people do a lot of nagging and scolding and every few weeks they physically assault the child. That is not what I mean by punishment.

By punishment I mean a consequence that really confronts the child, such as withdrawal of privilege, a work detail or, in my own jargon, time out for smaller children. We train the parents to use these kinds of punishments as a substitute for physical assault.

Senator SPECTER. You are not talking about a spanking?

Mr. PATTERSON. Spanking—most people I work with cannot use that very well.

Senator SPECTER. Cannot what?

Mr. PATTERSON. Use spanking. They escalate when they start to spank.

Senator SPECTER. Are you saying that corporal punishment is not any part of an answer?

Mr. PATTERSON. I have a personal bias about that.

Senator SPECTER. Aside from your personal bias, if you can.

Mr. PATTERSON. If, as a parent, you could consistently use corporal punishment so that each time the child did something deviant or antisocial you could use it, then it would work. But which of us as parents can practice that kind of arcane art? I don't think that's reasonable.

But if we can teach people to use nonviolent punishment, they can use it consistently. It's a very old idea. My Norwegian grandmother knew all about this and would be amazed that I am here talking about it.

Senator SPECTER. Could you amplify the nonviolent punishment? You said withdrawal of privileges, time out. What do you mean by "time out"?

Mr. PATTERSON. Well, there's a——

Senator SPECTER. No "Gunsmoke," no more television?

Mr. PATTERSON. All right. Yes, as a matter of fact, in our families we have them buy a padlock and lock the TV in the closet when they are getting ready to use this. If you are going to take TV away when he comes in at 2 in the morning, get ready to do it. And this is all carefully programed

Senator SPECTER. At 2 in the morning?

Mr. PATTERSON. The children we work with come in any time they please. Two o'clock was a major step for the family I'm thinking of, to get the kid to come in then.

Senator SPECTER. At age 8?

Mr. PATTERSON. This was a 10- or 11-year-old, an older one. [Laughter.]

Senator SPECTER. You whet my curiosity with many references, but the specific one I am about to come to is the language you used on the "efficient point." You said it was not efficient to go after a 9-year-old with three contacts with the law. Do you have an alternative?

Mr. PATTERSON. Well, there is a decade and a half of work within the paradigm called social learning theory where people have tried to train the parents of young, antisocial children—this is before the age of 14, but these are the kids who are practicing—and to collect careful data to determine the impact of training parents to manage their own children.

And I would say that the preliminary results on the studies are very promising, although some of them are still coming out in the literature. I am just speaking now of the state of the art.

Senator SPECTER. When do you anticipate that study will be concluded?

Mr. PATTERSON. If the research goes on, I think in 5 or 10 years we should be able to make a definitive statement about how many families of young, antisocial children can be helped, at what cost in terms of professional time, and what the followup data look like.

Senator SPECTER. What do we know now?

Mr. PATTERSON. In the hands of skilled practitioners—and these are not traditional social workers; they are trained in these new family management skills and they are skilled therapists—two components given that. These groups have been able to work with about, successfully, three out of four families and for the families of young, assaultive, aggressive children the long-term followup data are extremely good.

For the families of young thieves, the immediate effect is very good and the long-term outcome is in question, as I mentioned in my opening comment.

Senator SPECTER. Are we really looking to the assaultive behavior as opposed to the young thieves if we are directing our attention to robbery and burglary, crimes of violence?

Mr. PATTERSON. No, sir.

Senator SPECTER. The thieves may graduate into those who are guilty of fraud or embezzlement or larceny which, while important, is not quite as important as robbery and burglary.

Mr. PATTERSON. We think—I am going to shift now from talking about treatment, but in our recent varied analyses of, let's see now—excuse me.

There are four things that are disrupted in these families, according to the literature and our own clinical experience. I mentioned monitoring, punishment, support of prosocial skills and problem-solving skills among family members. And what we have found is there is one pattern of disruption that goes over here to thieving and vandalism and lying and truancy. There is another part of this pattern that goes over here to physical aggression. The statistical relationship is very good for each one of these tracks. The idea is that theiving—I mean, this young, practicing thief and the young, practicing fighter, when he is an adolescent he is very likely to be your delinquent and, as an intuitive hunch, I think maybe the chronic delinquent. So we are saying that young thiefs correlate with later delinquents and young fighters are also related to this.

Senator SPECTER. Do you know enough to draw a conclusion whether the thiefs turn out to be robbers? Robbery is an act of confronting someone and taking from their person by violence something of value, which is different from a burglar who goes into

a house hoping to avoid detection. He comes more into the traditional definition of a thief, I suppose, than someone who is assaultive, who confronts a victim.

Mr. PATTERSON. I don't think I could answer that question from my own work, but I think Dr. Farrington's work is more relevant to that question. We just haven't gone that far. Is that correct?

Senator SPECTER. Before turning back to Dr. Farrington, we did not quite come to grips with the efficient point of identifying the juveniles with whom we are concerned.

Mr. PATTERSON. Yes. If I could just speak very quickly to that, even if you have better ways of measuring what is going on in families than we have traditionally had and use some sort of compositing or converging set of measures that I haven't really talked about but I am advocating, you still have the problem of trying to predict a low-base rate event, as Dr. Monahan was saying.

Senator SPECTER. A low-base rate event?

Mr. PATTERSON. I'm sorry—something that doesn't happen very often. If only one child in five is delinquent, your best bet is to say nobody is delinquent and we can't go that way.

And if only 1 child in 16 is chronic, then your problem is even worse. So, given that the state-of-the-art in social science is as it is, how are you ever going to predict who is truly at risk and set up a prevention program? You need a new idea.

So, the second and last idea that I was going to present in my well-organized remarks here was an idea that has been present in mathematics and statistics for several decades but not used by people like ourselves.

It's very simple. It's called multistage assessment. You take the very nice criterion measures used by Dr. Farrington and others, say teachers' ratings of troublesomeness on fourth-grade kids, and then predict who is going to be a delinquent when they are 16 and 17, which is what they did, of course, and they found a nice relationship.

Now, the problem is that 54 percent of the kids that the teachers said are at risk don't turn out to be at risk, so we can't really use——

Senator SPECTER. What percent?

Mr. PATTERSON. Fifty-four percent. That was my calculation of his——

Mr. FARRINGTON. [Nods affirmatively.]

Mr. PATTERSON. The teacher identifies kids at risk——

Senator SPECTER. We have been granted a reprieve from the Appropriations Committee for a few minutes.

Mr. PATTERSON. Oh, I can slow down.

Senator SPECTER. No, no. You misunderstood me. I have been granted a reprieve. [Laughter.]

Mr. PATTERSON. So, if we are interested in prevention with young kids, then half of the kids we want to work with will turn out not to be delinquent when they grow up. So, that is not efficient.

Senator SPECTER. Well, what do you think about that? If you are dealing with 50–50, are we ever going to get any better in prediction than that?

Mr. PATTERSON. I think so, if you let me add this one more component.

Senator SPECTER. Go ahead.

Mr. PATTERSON. The possibility suggested by the statistical models is you use a cheap assessment device like teachers, ratings to screen out a group of kids who are at risk. Then, to take that group and use a more expensive assessment device to boil it down and to remove some of the errors, some of the normal kids that shouldn't be in there.

In a series of analyses we have done called multiple gating we have tried out this model, just predicting concurrently who is delinquent. We haven't tried the long-term longitudinal test that needs to be done, but we got the false positive error or we reduced this problem down from 70 percent in our sample to 36 percent.

Senator SPECTER. What are you shooting for? Fifty-fifty is not good enough. If you get to 70–30?

Mr. PATTERSON. Do you mean just at an intuitive level?

Senator SPECTER. Yes.

Mr. PATTERSON. If I were a clinician trying to do prevention work I would like to be assured that two out of the three kids I am working with would really end up being delinquent.

Senator SPECTER. Sixty-seven to thirty-three, roughly?

Mr. PATTERSON. Yes; that would be nice.

Senator SPECTER. What is the danger to the one you are wrong about? What cost do we incur by treating three and being wrong as to one?

Mr. PATTERSON. It depends, I suppose, on how you go about this. If you can enlist these families of 8-, 9-, and 10-year-old children in this hypothetical prevention program, which we have not talked about and I am not sure exists yet, without attaching any pejorative label to their participation, then I'm not sure you've done them a great harm.

I think it could be done without injuring people. I must say I have not thought through carefully what that would be. It seems like 5 or 10 years from now, in my own psychological time, so I am perhaps not a good person to talk to about that.

Senator SPECTER. Is there any fairly short-term study that could yield answers to the kinds of questions we are exploring here today, which might be funded with money available to the Office of Juvenile Justice and Delinquency Prevention?

On that subject you may know we face a very uncertain present and a more uncertain future. The funding was $100 million last year. President Carter's budget projected it to $135 million. President Reagan's budget zeroed it out. After a long battle we have had it retained at $70 million.

The Justice Department came back to the Appropriations Subcommittee with a request for $50 million to cut it $20 million. When they are looking for further funds to cut there are recurring suggestions of eliminating it totally.

It would certainly be useful to me as chairman of the subcommittee which has the jurisdiction to retain the funding over the program to be able to point to tangible promising studies. When you talk in 10-year terms, the reality is that no one will listen in the Senate, which must be concerned with today's budget. That is an overstatement, but it is harder to persuade on that basis. If some-

88-489 O—82——5

thing could be, if these funds could be directed to coming up with answers to these kinds of problems, they are of immediate concern.

Mr. PATTERSON. Well, standing on the other side of the fence I find these to be unusual times for a different reason. For one of the few times in social science we have a consensus on variables that relate to antisocial children and it seems to me possible to use this consensus, maybe generate a consortium of people like the English people, Farrington and West and Wadsworth and Rudder and people on this continent who are doing equally high-caliber work, to take the best ideas and the best instruments that we have and mount a set of short-term longitudinal studies that will test out our best ways of measuring these ideas.

Senator SPECTER. And what is short term?

Mr. PATTERSON. From my perspective, 4 or 5 years.

Senator SPECTER. What is shorter term and then what is shortest term? [Laughter.]

If we really come up with a program today, we really want to start doing something, and recognizing that these are very judgmental—you used the word "intuitive," that perhaps is the best word. We've got to act on it today. If we had to act on it today where would we go?

Mr. PATTERSON. I wouldn't believe anything that was done unless it had a short-term longitudinal design, frankly. I think we've gone as far as we can with the old way and the way in which you asked me the question forces me to go the old way and I just don't think it's efficient. I really don't.

Senator SPECTER. You think you could do a short-term study in 5 years?

Mr. PATTERSON. Dr. Farrington says yes. [Laughter.]

We have a consensus. [Laughter.]

I think 5 years is possible and it should be done in two locations so you would be sure this time of what you get, not just one but two. And if they worked, then you would be in a position to start field testing different prevention designs to see if you can help these people.

[The prepared statement of Mr. Patterson follows:]

The Prediction of Delinquency

David P. Farrington

(Institute of Criminology, Cambridge University; currently Visiting Fellow, National Institute of Justice)

The Cambridge Study in Delinquent Development

I would like to discuss the extent to which delinquency can be predicted by referring to a survey on which I have worked for a number of years, the Cambridge Study in Delinquent Development. The present paper is as non-technical as possible. The detailed, technical results of the survey can be found in 3 books and about 50 articles which have been published.

The main aim of this survey was to investigate the precursors and correlates of delinquency among English males. The survey began in 1961, when most of the boys were aged 8, and continued until 1980, when every one of them was aged at least 25. It was directed throughout by Professor Donald West, now Director of the Cambridge University Institute of Criminology, and during the major period of analysis and reporting I was equally responsible with him for the conduct of the research. I am still working on data collected in this survey during my Visiting Fellowship at the National Institute of Justice, and some of the results quoted have been obtained very recently and may yet be modified or expanded upon.

The 411 males in the study were first contacted in 1961-62 when they were aged 8-9. At that time, they were all living in a working class area of London, England. The vast majority of the sample was chosen by taking all the boys

aged 8-9 who were on the registers of six state primary schools which were within a one-mile radius of a research office which had been established. In addition, 12 boys were included from a local school for the educationally subnormal, in an attempt to make the sample more representative of the population of boys living in the area. The intention was to include about 400 boys in the study. The sample size, while limited by staffing and budgetary considerations, was intended to be large enough to permit statistical comparisons between convicted and unconvicted youths, yet small enough to permit individual interviews and detailed case studies.

The boys were almost all white in appearance. Only 12, most of whom had at least one parent of West Indian origin, were black. More than 90 percent were being brought up by parents who had themselves been reared in the United Kingdom or the Irish Republic. On the basis of their fathers' occupations, about 94 percent could be described as working class, in comparison with the national figure of 78 percent at that time. Therefore, this was overwhelmingly an urban, white, working class sample of traditional British origin.

Sources of Data

The boys were tested in their schools when they were aged about 8, 10, and 14, and they were interviewed in the research office at about 16 and 18. In addition, subsamples were interviewed at ages 21 and 24. Up to and including age 21, it was always possible to trace and interview a

high proportion of the sample. At age 18, 10 years after the study had begun, 95 percent of the original 411 boys were interviewed. Of the 22 youths missing at this age, only one had died, only one could not be traced, 6 were abroad, 10 refused to be interviewed, and in the other 4 cases the parent refused on behalf of the youth.

At age 21, the aim was to interview only the convicted delinquents and a similarly sized randomly chosen sample of non-delinquents, rather than all the youths. More than 90 percent of the target group of 241 were interviewed. At age 24, the aim was to interview four subgroups of youths: continuing delinquents, "reformed" delinquents, a group from seriously deprived backgrounds, and a random sample of unconvicted youths. Only about 75 percent of the target sample of 113 were interviewed, primarily because so many of these youths had left home and were difficult to trace at this age.

In addition to the interviews and tests with the boys, interviews with their parents were carried out by female social workers who visited their homes. These took place about once a year from when the boy was aged 8 until when he was about 14-15 and in his last year of compulsory schooling. The primary informant was the mother, although the father was also seen in the majority of cases. The boys' teachers also filled in questionnaires about their behavior in school, when the boys were aged about 8, 10, 12, and 14.

It was also possible to make repeated searches in the central Criminal Record Office in London to try to locate

findings of guilt sustained by the boys, by their parents, by their brothers and sisters, and (in recent years) by their wives. These searches continued until March 1980, when the youngest boy was aged 25 years 6 months. The criminal records of the boys are believed to be complete from the tenth birthday (the minimum age of criminal responsibility in England and Wales) to the twenty-fifth birthday. In addition to the official records, admissions of delinquent acts which had not necessarily led to convictions were obtained from the youths at ages 14, 16, 18, 21, and 24.

Conviction Careers

Almost exactly one-third of the boys (136) were found guilty in court for a criminal offense (defined here as an offense routinely recorded in the Criminal Record Office) committed between their tenth and twenty-fifth birthdays. The majority of these offenses were thefts, burglaries or unauthorized takings of motor vehicles, and most were committed with one or two other persons, usually boys of similar age. Perhaps the most serious criminal was the youth who carried out two robberies using guns, stealing more than $65,000. He was given 5 1/2 years imprisonment for one, consecutive to a previous sentence of 21 months imprisonment for burgling a farmhouse, and 7 years concurrent for the other. All three offenses were committed when he was aged 24. His first conviction was at age 15, also for robbery, for which he received a discharge.

Table 1

Ages at which Offenses were Committed which Led to Convictions

Age	Number of First Convictions	Number of Different Boys Convicted	Number of Convictions
10	6	6	7
11	6	8	10
12	8	12	14
13	15	21	27
14	19	34	44
15	17	33	43
16	13	32	47
17	19	47	63
18	8	41	50
19	8	38	47
20	9	29	41
21	2	18	20
22	2	24	33
23	2	11	11
24	2	13	18
Total	136		475

Table 1 shows the number of first convictions, the number of different boys convicted, and the number of convictions at each age. It can be seen that the number of youths first convicted declined dramatically after the twenty-first birthday. The period from the tenth to the twenty-fifth birthday spans four legal categories in England and Wales: children (tenth to just before fourteenth birthday), young persons (fourteenth to just before seventeenth birthday), young adults (seventeenth to just before twenty-first birthday) and adults (twenty-first birthday onwards). Children and young persons together are juveniles. It can be seen that 35 boys were first convicted as children, 49 as young persons (making 84 altogether as juveniles), 44 as young adults, and only 8 as adults.

The peak age for the number of different youths convicted (47) and for the number of convictions (63) was 17. By age 24, these figures had fallen to only about a quarter of their peak values (13 boys convicted, 18 convictions). The peak period of convictions for this sample was from 14 to 20, with at least 40 convictions (10 per 100 boys) at each age.

The likelihood of a convicted person being convicted again tended to increase with his number of convictions. While 33 percent of the sample were convicted, 62 percent of those with one conviction were convicted again. For those with 2-5 convictions, 70-75 percent were convicted again, and for those with 6-10 convictions 78-92 percent were convicted again. For example, of 12 boys who received

10 convictions, 11 (92 percent) went on to receive an eleventh conviction. The numbers were too small to continue with this analysis after this point.

A small number of boys were responsible for a large number of convictions. The 23 boys with 6 or more convictions (5.6 percent of the sample) accounted for 230 of the 475 convictions (48.4 percent) - an average of 10 each. The same phenomenon had been seen in an earlier analysis in which the boys' convictions had been added to those of their fathers, mothers, brothers and sisters. A minority of 18 families (4.6 percent) accounted for 581 of the total number of convictions (47.7 percent).

There was a close relationship between juvenile (age 10-16) and adult (age 17-24) convictions. For the purposes of this analysis, the 5 boys who were known to have died up to age 25 (all convicted, incidentally), and the 11 who had emigrated, were eliminated. Over three-quarters of those with 4 or more juvenile convictions also had 4 or more adult convictions (10 out of 13, or 77 percent). This was true of only 2 percent of those with no juvenile convictions (7 out of 317), 14 percent of those with one juvenile conviction (6 out of 44), and 29 percent of those with 2-3 juvenile convictions (6 out of 21). The average number of adult convictions increased from those with no juvenile convictions (0.29) to 1 juvenile conviction (1.45) to 2-3 juvenile convictions (2.76) and to 4 or more juvenile convictions (average 4.85 adult convictions). While the analyses have not yet been completed, it seems likely that the number of juvenile

convictions will prove to be the best predictor of the number of adult convictions.

Predicting Juvenile Delinquency

As many factors as possible were measured before the boys were 10 and could be found guilty in court. These could be genuinely predictive of juvenile convictions, unbiased by the knowledge of who became delinquent. As already mentioned, about 20 percent of the boys (84) became convicted juvenile delinquents, and they differed significantly from the unconvicted majority on many of the factors measured before age 10. The best single predictor of juvenile delinquency was troublesome behavior in the primary school, as rated by teachers and peers. On this and other factors, the boys were divided into approximate quarters, as far as possible.

Of the 92 boys rated most troublesome, 44.6 percent were convicted as juveniles, in comparison with only 3.5 percent of the 143 least troublesome boys. Turning the percentages round, 48.8 percent of the juvenile delinquents had been rated in the most troublesome group in their primary schools. The fact that troublesomeness was the best predictor of delinquency is not really surprising, in view of the continuity of behavior. The boys who were violating the rules of the primary school at age 8-10 tended to go on violating rules outside school between ages 10 and 16. Of course, the amount of error in this prediction should not be forgotten. A little less than half of the troublesome

boys became juvenile delinquents, and a little less than half of the juvenile delinquents had been rated troublesome.

Five other factors which were not measures of bad behavior were important predictors of juvenile convictions. The delinquents tended to come from poorer families, larger sized families, those with convicted parents, those suffering poor parental behavior (that is, cruel, passive or neglecting attitudes, erratic or harsh discipline, and parental disharmony), and tended to have low IQs. Once again, the accuracy of each prediction was not impressive, although all the relationships were statistically highly significant. For example, one third of the 93 boys from the poorest families became delinquents, in comparison with one sixth of the remainder. In other words, although the poorest boys were proportionally twice as likely to be convicted as the remainder, two thirds of the poorest boys were not convicted as juveniles.

It might be thought that the accuracy of delinquency prediction could be improved by combining the above five factors. This would be a retrospective exercise done with the benefit of hindsight, and therefore it would tend to overestimate the true degree of predictability. The exercise was done very simply, by identifying the 63 boys with at least three of the five background adversities. Almost exactly half of these (31) became juvenile delinquents, which was little improvement on troublesomeness alone. Furthermore, a combination of troublesomeness and the five

background factors also was no better as a predictor than troublesomeness alone.

The use of more sophisticated methods of selecting and combining predictor variables also indicated that the limit of predictability with these data was reached in identifying a vulnerable group of whom half became delinquents, in turn containing half of the delinquents. This limit probably reflects the importance of later factors in causing delinquency, the extent to which findings of guilt in court depend on essentially random or unpredictable factors, and the impossibility of accurately measuring the predictive factors.

Many other factors measured before age 10 predicted juvenile convictions to a statistically significant degree. The delinquents tended to come from families living in poor houses with neglected interiors, supported by social agencies, physically neglecting their children, and uncooperative towards the research. They tended to come from those born illegitimate, and from those who had experienced broken homes or separations from their parents for reasons other than death or hospitalization. They tended to be drawn from those whose parents were uninterested in education, who were lax in enforcing rules or under-vigilant, or who tended to endorse authoritarian child-rearing attitudes on questionnaires. Their mothers tended to be nervous and in poor physical health, while their fathers tended to have erratic job histories. Some of the negative results were also of interest.

For example, the juvenile delinquents did not tend to have working mothers.

The above predictive factors were less important than the five background factors which I mentioned first of all. For example, the boys who had been separated from their parents tended also to be those who had convicted parents. Separations did not predict juvenile delinquency over and above convicted parents, whereas convicted parents did predict juvenile delinquency independently of separations. These results suggested that separations appeared to predict juvenile delinquency primarily because this factor was associated with the more important factor of convicted parents.

"Self-Reported" Juvenile Delinquents

All the preceding results apply to the officially convicted juvenile delinquents. Self-report and victim surveys indicate that the official records are very much the tip of the iceberg of offending. As an alternative measure of juvenile delinquency, the boys were given a self-reported delinquency questionnaire at ages 14 and 16. In this, they were asked to say whether they had committed each of 38 delinquent or fringe-delinquent acts. As a measure of self-reported juvenile delinquency, each boy was scored according to the total number of different acts he admitted at either or both ages. The validity of these scores was confirmed by the fact that they significantly predicted future convictions among unconvicted boys.

For ease of comparison with the 84 official juvenile delinquents, the 80 boys with the highest self-report scores,

all of whom admitted at least 21 acts, were grouped together and called the self-reported juvenile delinquents. The overlap between the two categories was very marked, amounting to about 50 percent (41 boys). This suggests that, to a large extent, the boys who sustained findings of guilt as juveniles tended to be those who committed the most offenses. While the official records may be a poor measure of the overall incidence of offending, they do seem to be useful in separating out the more and less frequent (and serious) offenders.

No doubt at least partly because of the overlap between the two groups, the factors which predicted official juvenile delinquency tended also to predict self-reported juvenile delinquency. The self-reported delinquents tended to be rated troublesome in their primary schools, tended to come from poor, large-sized families, suffered poor parental behavior, had convicted parents, and had low IQs. All these factors were especially common among the group of boys who were both official and self-reported delinquents. For example, 61 percent of this group had convicted parents, in comparison with 30 percent of those who were official but not self-reported delinquents, 26 percent of those who were self-reported but not offical delinquents, and 20 percent of the majority who were neither.

Criminal Behavior by Young Adults

The majority of boys, 51 out of 95, who were convicted as young adults (between their seventeenth and twenty-first birthdays) had previously been convicted as juveniles. There-

fore, it was no surprise to find that troublesomeness and the five background factors significantly predicted young adult convictions. However, when it came to predicting those convicted for the first time as young adults, low IQ and poor parental child-rearing behavior at age 8-10 were no longer predictive. Later measures of low IQ, at age 14, and of some of the elements of poor parental behavior (notably, parental disharmony), did predict these "late-comers to crime." The other measures at age 8-10 (troublesomeness, low family income, large family size, and convicted parents) predicted first convictions as young adults, although those first convicted as young adults generally came from less adverse backgrounds than the juvenile delinquents. For example, 45 percent of convicted juveniles had a convicted parent by age 10, but only 36 percent of those first convicted as young adults.

On the basis of the interviews at age 18-19, it seemed that criminal behavior was only one element of a socially deviant life style. In comparison with the remainder, the young adult delinquents tended to be heavy drinkers, heavy smokers, and heavy gamblers. They were more likely to have been found guilty of minor motoring offenses, to have driven after drinking at least 5 pints of beer, and to have taken prohibited drugs such as cannabis or LSD. They were more likely to have had frequent sexual intercourse, especially with a variety of different girls, and to spend time hanging about on the streets. The young adult delinquents changed

jobs more frequently, and tended to hold relatively well paid but low status jobs. They were also more likely to be involved in group violence and vandalism, and to agree with aggressive and anti-establishment attitude statements in a questionnaire.

A measure of self-reported delinquency at age 18-19 was obtained by asking the youths how often they had committed each of seven specified criminal activities in the previous three years, namely damaging property, taking and driving away motor vehicles, receiving stolen property, burglary, shoplifting, stealing from slot machines, and stealing from parked cars. As before, about half of those who were the most delinquent according to their own admissions were convicted, and the self-reported delinquents shared many of the features of the official delinquents.

Predicting Criminal Violence

The prevalence of convictions for violence in this sample was, of course, much less than the prevalence of convictions in general. For example, up to age 21, only 6.6 percent had been convicted for violence, out of the total of over 30 percent convicted of criminal offenses. The criteria for inclusion in the officially violent group were strict. A youth was only included if he was convicted of an offense that must have involved violence against another person (such as causing actual bodily harm), or if a police report stated that he had used, or threatened to use, physical violence against another person during the commission of an offense. Robberies that involved mere jostling or

snatching were not counted, and neither was possessing an offensive weapon without actually using it or threatening to do so.

Because of the small number of people involved, it is obviously harder to predict convictions for criminal violence than convictions in general. Nevertheless, convictions for criminal violence could be predicted to a statistically significant degree by teachers' ratings of aggressive behavior in class at age 8-10. Of the quarter of the sample who were the most aggressive, 14 percent became violent delinquents, in comparison with 4.5 percent of the remaining three-quarters. This prediction had a very high false positive rate of 86 percent. However, turning the percentages round, nearly half of the violent delinquents (48 percent) had been rated aggressive as children, in comparison with only about one fifth (21 percent) of those who did not become violent delinquents.

It might be argued that what should be predicted is not convictions for violence but violent behavior, and that the behavior is more common than the convictions. Self-reports of violent behavior were obtained in the present research by inquiring about involvement in fights, starting fights, carrying weapons, and using weapons in fights. The teachers' ratings of aggressive behavior at 8-10 significantly predicted self-reports of violence at 16-18, with 40 percent of the most aggressive quarter at 8-10 being in the most violent quarter at 16-18. The false positive rate is lower in this kind of comparison.

88-489 O—82——6

Other factors also predicted criminal violence. At age 8-10, the violent delinquents tended to have parents who were cold, harsh, disharmonious, convicted, and poor supervisors. They also tended to have low IQs and to be rated daring by parents and classmates. Each of these factors predicted criminal violence independently of each other factor. Harsh parental attitude and discipline was the best predictor of convictions for violence, being an even better predictor than teachers' ratings of aggressive behavior in school. The same factors predicted youths who were high on self-reported violence at age 16-18.

Predicting the End of Delinquency Careers

While in the earlier part of this research the emphasis was on predicting the onset of delinquency careers, the emphasis in later years has been on predicting their end. Most of these analyses have been based on comparisons between "temporary recidivists" (those with at least 2 convictions up to the nineteenth birthday and no more in the next 5 years) and "persisting recidivists" (those with at least 2 convictions up to the nineteenth birthday and at least one more in the next 5 years). The temporary recidivists were less deviant than the persisting recidivists when interviewed at ages 21 and 24. For example, the temporary recidivists were less likely to be unemployed, to be heavy drinkers, to be living with a woman but not married to her, to be living in poor housing conditions, and (in the previous two years) to have convictions for motoring offenses, to have taken prohibited drugs, and to have been involved in fights.

As might have been expected, the recidivists who persisted in their delinquency careers tended to have more prior convictions than those who ceased. More than half of the persisting recidivists (54 percent) had four or more convictions up to the nineteenth birthday, in comparison with only 19 percent of the temporary recidivists. This was another example of the prediction of future conviction record from past conviction record. However, over and above the number of previous convictions, the persisting recidivists were more likely to come from large, low income families and to have a convicted parent at age 10. These early factors of poverty, family size, and parental convictions predicted not only the onset of delinquency but also its ending.

Another predictor of the persistence of delinquency, which was as effective as the number of previous convictions, was the measure of "antisociality" or deviant life style at age 18-19. This was a combination of factors such as sexual promiscuity, driving after drinking, heavy smoking, heavy gambling, drug use, anti-establishment attitudes, aggressive behavior, and an unstable job record.

Conclusions of the Research

The Cambridge Study in Delinquent Development shows how a constellation of adverse family background factors (including poverty, large families, parental disharmony, and ineffective child rearing methods), among which parental criminality is likely to be one element, leads to a constellation of socially deviant features in late adolescence

and early adulthood (including drinking, gambling, drug use, reckless driving, sexual promiscuity, and aggression), among which criminal offending is again likely to be one element. It seems likely that the convicted youths in our sample will tend to recreate for their own children the same undesirable family environments, thus perpetuating from one generation to the next a range of social problems of which delinquency is only one element.

Does this English research have any relevance for the United States? I would submit that it does. In studying the development of delinquency, the United States has three outstandingly brilliant researchers who have greatly advanced our knowledge - Joan McCord (of Drexel University, Philadelphia), Lee Robins (of Washington University, St. Louis), and Marvin Wolfgang (of the University of Pennsylvania, Philadelphia). I think that anyone who compares their results with our English conclusions must be struck by the many similarities.

For example, Marvin Wolfgang has reported that 6 percent of his boys were responsible for 52 percent of all the arrests, and that the probability of one arrest following another increased steeply, from 35 percent for a first arrest to between 70 and 80 percent for arrests following the third. Lee Robins has shown how delinquency is one element of a larger syndrome of "antisocial personality" which begins in childhood and continues into adulthood. As children, her antisocial group tended to steal, truant and run away from home, and to be aggressive, enuretic, disciplinary problems in school,

better. Current attempts to prevent and treat delinquency occur much too late in an individual's life. If delinquency is part of a larger syndrome beginning in childhood and continuing into adulthood, interventions in the first few years of life are most likely to be successful. Even before the children are born, we can identify people with a high risk of having delinquent children, such as men with convictions, especially if they get married to women with convictions. What is needed is special help and support for these people and their children in their first few years of life.

What options are there for the criminal justice system? There are many aims of sentencing, including individual and general deterrence, rehabilitation, incapacitation, preventing unofficial retaliation, retribution, denunciation, and reparation. Our research has some implications for deterrence and incapacitation.

General deterrence is based on the theory that crimes are committed rationally, with individuals weighing the likely costs against the likely gains. Our research indicated that there is some truth in this theory, at least for the majority of offenses. When we asked our youths why they committed offenses, the most common category of reasons given (60 percent) were rational ones. By and large, it seemed that the youths stole and burgled purposefully, for the material gains involved. The next most common category (20 percent) were motives of excitement or enjoyment. Offenses of damaging property and taking motor vehicles were particularly likely to be done for enjoyment, whereas rational motives

If it is taken seriously, it is difficult to reconcile with an explanation of increased delinquency based on stigmatization or labelling, since a discharge should have the least stigmatizing effect of any disposal. It seems more plausible to suggest that court appearances followed by discharges led to a decrease in deterrence. In other words, those who went to court and had nothing happen to them may have become less afraid of a court appearance than they were before, and therefore more likely to commit delinquent acts. Court appearances followed by discharges may be worse than no court appearance at all.

The final analysis which I will mention here attempted to investigate the value of incapacitation as a penal policy. During the interviews at age 18-19, the youths were asked how many of certain specified kinds of crimes they had committed in the previous 3 years (as described earlier). The 389 boys interviewed reported a total of 342 burglaries. During this 3 year period, 28 of the boys (7.2 percent) had been convicted of a total of 35 offenses of burglary, indicating that the probability of a burglary leading to a conviction was about 10 percent. These 28 convicted boys reported committing 136 burglaries, or about 40 percent of the total admitted. They also reported 223 acts of damaging property (36 percent of the total admitted), 200 of stealing from meters, telephone booths, etc (36 percent), 111 of stealing from vehicles (24 percent), 88 of taking and driving away vehicles (21 percent), and 194 of shoplifting (16 percent).

What if there had been a mandatory sentence of 3 years

pathological liars, and so on. As adults, they tended to be arrested, divorced, placed in mental hospitals, alcoholics, sexually promiscuous, vagrants, bad debtors, poor workers, and so on. Joan McCord has shown how parents with cruel, passive or neglecting attitudes, or erratic or lax discipline, tend to have delinquent children.

Implications for Delinquency Prevention

Our research shows that, at least to a statistically significant extent, convictions and delinquent behavior can be predicted. What can be done to prevent them? Any attempt to prevent delinquency should be based on a theory about why people commit delinquent acts. Many factors have been proposed as causes of delinquency, including heredity, early environment and upbringing, personality, socio-economic and demographic status, current living circumstances, perceptual and motivational processes of the person, and the temptations of the immediate situation. One of the best available theories of delinquency at the present time is that put forward by Travis Hirschi (of the University of Arizona, Tucson), and I am happy to report that most of our results are in conformity with it.

Our research places most emphasis on early environment and upbringing. The educationally retarded children from large, poor, criminal families are especially at risk of committing criminal and delinquent acts. Even at the cost of taking a little away from the more fortunate members of the society, scarce welfare resources should be concentrated on this high risk group. In my opinion, the earlier the intervention the

predominated in all other cases. To the extent that crimes are committed rationally, it should be possible to deter people from committing them by increasing the probability of apprehension and/or the severity of penalties.

We also tried to investigate the individual deterrent effect of convictions on the subsequent delinquent behavior of the convicted people. This analysis was limited to first convictions. If a first conviction has an individual deterrent effect (or a reformative effect for that matter), then it might be expected that a youth's delinquent behavior would decrease after he was convicted. On the other hand, it is possible that first convictions might have undesirable (stigmatizing and contaminating) effects which propelled youths into more delinquent behavior than before. As measures of delinquent behavior, we used our self-reported delinquency scores at ages 14 and 18. We found that the 53 youths first found guilty in court between 14 and 18 had significantly increased delinquency by the later age, in comparison with unconvicted youths matched at 14. All the evidence suggested that first convictions were followed by a worsening of delinquent behavior.

We then investigated whether first convictions between 18 and 21 had the same effect, and found that they had. In this case, we also studied the effect of the different disposals given in court. Most first convictions were followed by a discharge or a fine. We found that those who were discharged had significantly increased delinquency, whereas those who were fined did not. This result is based on small numbers.

incarceration for every convicted burglar aged 15 1/2 - 18 1/2? Without going into all the assumptions and complications (which do not really affect the argument), it is not unreasonable to suppose that this policy might have led to a 40 percent reduction in the total number of burglaries, and to substantial reductions in other categories of crime.

Superficially, such a sentencing policy might seem attractive. However, it involves such an enormous increase in institutionalization that it is quite impractical. Of the 28 youths convicted of burglary, only 7 actually were given institutional sentences for it. Of the remainder, 9 received probation, 6 received a fine, and 6 were given a discharge. Of the 7 institutionalized youths, 4 were sent to a detention center, which would have involved 2 months incarceration each. The other 3 (two going to borstal and one to a training school) probably were each incarcerated for about 9 months. The total incarceration actually experienced by these 28 burglars, then, would have been about 35 months. To incarcerate all 28 for 3 years each would mean increasing the incarceration rate by a factor approaching 30.

Let us be a little more realistic and investigate what would be the effect of doubling the incarceration rate for burglary (the number of boy-years served) from 3 to 6. Each boy convicted of burglary reported committing an average of about 1.6 burglaries per year. Doubling the incarceration rate for burglary might therefore have prevented 5 of the total number of 342 burglaries reported - about 1 1/2 percent. To my mind, the benefits of incapacitation for burglary are not worth the costs, and I think a similar conclusion would follow for most crimes.

To conclude, I think our best hope of reducing delinquency is to intervene early in the lives of high risk groups.

Senator SPECTER. Ms. Donna Hamparian, you are the principal investigator of youth and adult court study, fellow in social policy, Academy for Contemporary Problems, in Columbus, Ohio. We have not given you an opportunity to speak yet. .

Let's start with a question from your range of experience, if you have an estimate as to what would be the minimal range of time that we need for a study to come to conclusions on these questions.

STATEMENT OF DONNA HAMPARIAN, PRINCIPAL INVESTIGATOR, YOUTH IN ADULT COURT STUDY, FELLOW IN SOCIAL POLICY, ACADEMY FOR CONTEMPORARY PROBLEMS, COLUMBUS, OHIO

Ms. HAMPARIAN. I would like to make a few statements about some of the things that have been said previously.

Senator SPECTER. Fair enough.

PATTERNS OF VIOLENT JUVENILE OFFENSES

Ms. HAMPARIAN. From the research that has been done on delinquents, on kids who have actually been arrested and are in the system, regardless of what kinds of offenses they are there for, there is evidence—very, very strong evidence—that delinquents are generalists. Maybe they will become specialists as adults, but as juvenile delinquents they may commit a robbery one day and burglary the next day and an assault the next day.

It is very difficult to talk either in terms of juvenile robbers, burglars, muggers, or any other kinds of special categories of juvenile delinquents, because they cover the whole gamut.

In addition to that, there has also been a lot of evidence in the last few years to indicate that juveniles tend to commit delinquent acts in groups and many of those delinquent acts are unplanned. A group will be walking down the street and one of the juveniles will say, let's rip that purse off and all of the kids will be arrested for ripping that purse off.

Now that youth may never have been in trouble before and may never be in trouble again and was not the instigator in the involvement.

Senator SPECTER. But was a participant.

Ms. HAMPARIAN. But was a participant, and I'm not saying he was blameless. I am saying it is of a different nature than when an adult who tends to commit crimes alone works out a nice, neat plan and then proceeds to carry out his plan.

Perhaps the older teenagers tend to be more like the adults in some instances, at least your chronic offenders, but generally speaking, juveniles cover the whole gamut of violations.

In addition to that, there is also evidence to suggest that there is no escalation of juvenile offenses. A juvenile delinquent does not get arrested the first time for shoplifting or a status offense and the second time for a burglary and the third time for robbery and the fourth time for an armed robbery and the fifth time for murder. There is just not that kind of neat package, at least when we are talking about juveniles who have committed at least one violent offense in their juvenile delinquent careers.

Senator SPECTER. How do they start, from the experience you have seen?

Ms. HAMPARIAN. In order for the juveniles to qualify for our coport study, they had to have been arrested at least once for a personal offense in their juvenile careers. We then included all the arrests for each juvenile before and after the violent offenses.

Senator SPECTER. Personal?

Ms. HAMPARIAN. Yes. We defined violent more broadly than the Office of Juvenile Justice is defining it. We included all assaults, not just aggravated assaults.

Senator SPECTER. A personal offense would be a robbery, a burglary?

Ms. HAMPARIAN. Robbery, not burglary, murder, rape, sodomy, assault. I think I've covered them all.

We found that a juvenile was as likely to commit a personal offense—if he had at least three arrests in his history—in the first third of his career as he was in the second third of his career as he was in the third third, and there wasn't any higher probability that he would commit it at the end of his juvenile years as opposed to the beginning of it.

Senator SPECTER. It would be unlikely there would be a murder committed at age 11?

Ms. HAMPARIAN. But when we are talking personal offenses we are talking robbery and assault, in addition to murders and rapes.

Senator SPECTER. But you would not likely have an armed robbery at 11 or 12 either?

Ms. HAMPARIAN. No, but you have a lot of robberies.

Senator SPECTER. Purse-snatching?

Ms. HAMPARIAN. Yes, the very aggravated offenses—the armed offenses—tend to be the work of older children, but they are very rare within a community.

Senator SPECTER. What kind of robberies have you seen for young juveniles, 12-year-olds, besides purse-snatching?

Ms. HAMPARIAN. Strong-armed robberies with schoolmates.

Senator SPECTER. At that age?

Ms. HAMPARIAN. Yes.

Senator SPECTER. With schoolmates?

Ms. HAMPARIAN. Yes. A great many juvenile offenses are committed against peers. Peers are the most likely victims of juvenile offenders. So strong-armed robbery is a very frequent type of offense within violent offenses because there aren't a lot of kids who are committing violent or personal offenses.

Another point, less than 2 percent of the age-eligible kids were ever arrested for a personal offense during their juvenile years, between 6 and 18 years of age.

Senator SPECTER. Less than 2 percent?

Ms. HAMPARIAN. Yes, so it's a very small number.

Senator SPECTER. Dr. Wolfgang's statistics, I think, would disagree with that.

Ms. HAMPARIAN. His are higher because he was using delinquents. We were using assaultive offenses as a qualifier. If a kid didn't commit a personal offense he didn't quality for our cohort, but Dr. Wolfgang's study included any juvenile who was arrested for, I think, police contact as opposed to arrest for any offense.

So, in a sense, ours was more limiting than his definition.

Senator SPECTER. But most police offenses include some sort of assaultive conduct, do they not?

Ms. HAMPARIAN. No. Among juvenile arrests—and this isn't from the study, this is from other information—juveniles who are arrested nationally or in almost any State, the percentage of violent offenses—and that doesn't include assault and battery; it just includes robbery, murder, rape, and aggravated assault—represents between 4 and 5 percent of juveniles arrested.

Senator SPECTER. Well, what are they arrested for that you have seen—possession of drugs?

Ms. HAMPARIAN. I think probably the most common is larceny, theft. Shoplifting is a very frequent juvenile offense. Car theft is a frequent juvenile offense. Alcohol charges, drug charges, other public ordinances—vandalism, malicious mischief—that type of offense represents a little better than 60 percent of all of the arrests of juveniles. What are called post 2 offenses, as opposed to index crimes, represent over 60 percent of the arrests of juveniles in the country.

So when we are talking about serious property offenses, including burglary, larceny, theft, or auto theft, or the violent offenses, we are talking about a fairly selective group of juvenile offenders.

PREVENTION AND EARLY INTERVENTION

Senator SPECTER. Ms. Hamparian, how would you direct your attention to deal with the potential career criminals? Where would you start and how?

Ms. HAMPARIAN. I think I would use two different approaches. One would be a structural approach and the other would be an individual approach or, perhaps, it could be interpreted even structurally.

There is reason to believe that children who are being abused as very young children are more likely to be violent as adults, and I think that we probably need to pay more attention to abusive homes—physically abusive families—whether it is done in the name of punishment for misbehavior or whether it is done in the name of anger.

We need to make that home safe for the child, and if we cannot make the home safe for the child we must remove the child from the home, because there is evidence to suggest—and this is in its infancy—that there is permanent damage done to the child.

Senator SPECTER. At what age would you do that?

Ms. HAMPARIAN. We are talking about prevention programs which begin at, perhaps, 1 month. I don't know.

Senator SPECTER. At 1 month?

Ms. HAMPARIAN. At 1 month you are dealing with the family, not the child, so that the child is not abused.

Senator SPECTER. And at the age of 1 month you might remove the child?

Ms. HAMPARIAN. You might have to. I don't know. I'm not a social worker. There are certain indications as you work with a family until you——

Senator SPECTER. But you might start that early?

Ms. HAMPARIAN. I think you have to start that early in addressing the issue of child abuse.

Senator SPECTER. And where do you place the children?

Ms. HAMPARIAN. Well, there was a little book written a few years ago by Goldstein, Freud, and Solnik [1] who suggest that for children who have to be removed from the home very early where it is absolutely necessary for the protection of the child you have to make them available for adoption or permanent damage may be done.

Again, I am not a social worker and I am not a psychologist.

Senator SPECTER. That would be a tough legal problem.

Ms. HAMPARIAN. A very tough problem.

Senator SPECTER. To compel parents to take away parental custody.

Ms. HAMPARIAN. That's right. All I'm suggesting is that the area needs to be looked at much more closely.

A psychologist up in Connecticut was doing some work. A gentleman by the name of Welsh was doing some work on abused adolescents and working with the family unit to try to prevent or try to reteach the child not to act in a violent way as an adaptive technique because this is what he had been seeing all of his life. But that is not my field, so I will leave it to the gentlemen who know more about that than I do.

There is another area of prevention programs that are, again, in their infancy and according to some preliminary studies have some reason to be hopeful, and that is indigenous community programs.

Senator SPECTER. What?

Ms. HAMPARIAN. Indigenous community programs—programs being operated by indigenous community groups to use positive training instead of negative training, for example, to use the old-fashioned settlement houses as community centers for positive activities, to involve the whole family in positive community activities.

Some of the early work indicates there is some hope in doing that kind of thing in the very high crime areas. All of the data shows that delinquency is more prevalent in poor neighborhoods, particulary serious delinquency.

Senator SPECTER. How would that be orchestrated, planned, or carried out?

Ms. HAMPARIAN. It would have to be done through an organized community group that had the support of the residents within that community.

Senator SPECTER. What do you think the likelihood of an upsurgence in voluntarism is in this country today in light of the President's call for voluntary assistance—psychiatrists donating time, psychologists donating time, lawyers donating time, community activities of the kind you suggest?

Ms. HAMPARIAN. If you are talking about community groups from the community themselves, in the next few years, if the programs that are proposed or the cuts in programs that are proposed go through, people are going to be scrambling to eat and they

---

[1] "Beyond the Best Interests of the Child," Free Press paperback, McMillan publishing, c 1973.

will not have the time or the energy to give voluntarily to programs to help people within the community.

Senator SPECTER. So we have to keep the programs up so we do not need to rely solely on volunteers.

Ms. HAMPARIAN. There are volunteers who can be used effectively, but I am not sure your indigenous community groups are the type of programs that could be exclusively run by volunteers.

Senator SPECTER. Do you think the lawyers and psychiatrists will be scrambling for things to eat?

Ms. HAMPARIAN. No, I don't think so, but I think there will be some people who have always given time to volunteer programs and they will continue to give time, but they won't be able to give the commitment either in time or effort required to deal with the multiproblem families within multiproblem communities.

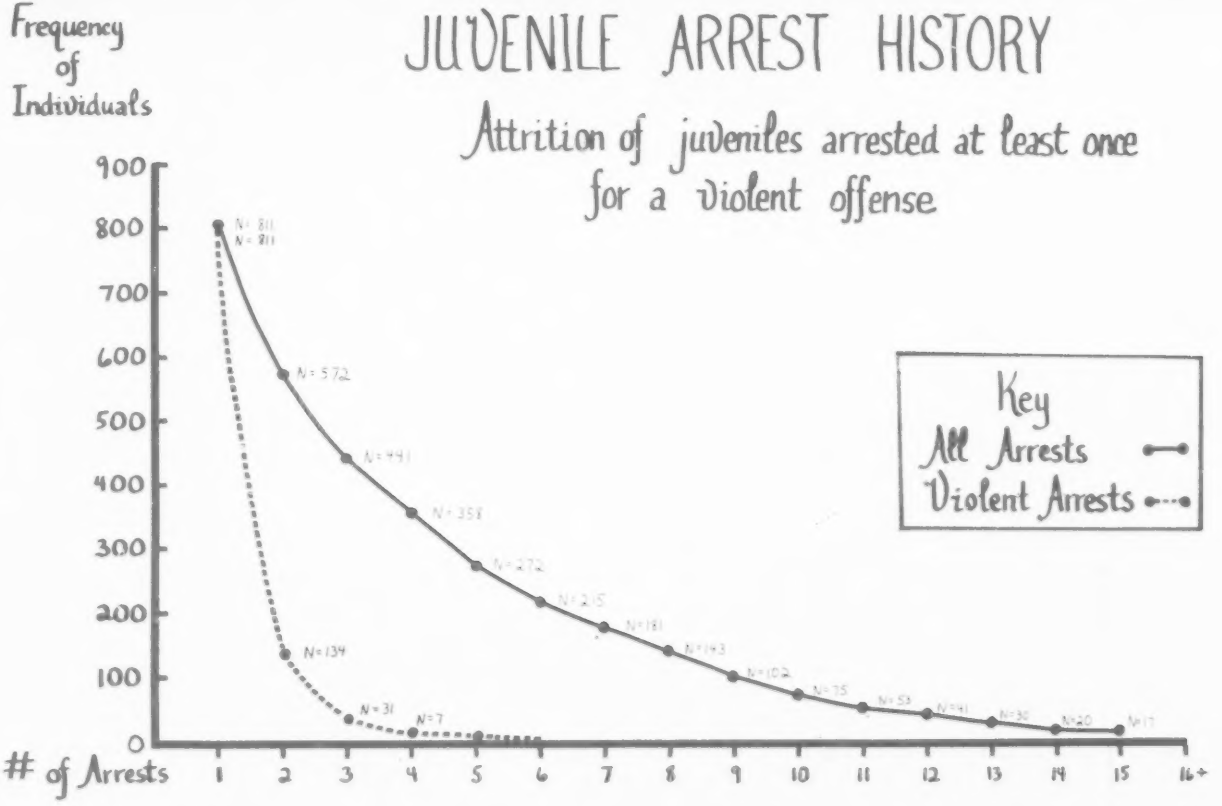
And that I feel very strongly about from being involved in some of these communities and from seeing the strains under good conditions that exist on some of these families when there is an alcoholic mother and an absentee father and psychological problems and learning problems and everything else. They need professional help to deal with those.

Senator SPECTER. We have proceeded for about an hour now and we have another panel of two witnesses and I think I will probably have to go to the Appropriations Committee soon.

Let me ask, in conclusion, if there is anything special that each of you would like to add in an appropriately brief period.

PREDICTION OF VIOLENT JUVENILE CRIME

Ms. HAMPARIAN. I would like to show you these two charts. It is retrospective, but it gives some idea on probability, if you like, and again this is from our first cohort.



Attrition of Juveniles by Sequence of Offense for 1956-58 Birth Cohort

To restate the cohort included only juveniles who had been arrested at least once for a violent offense. We have 811 juveniles within the 1956–58 birth cohort. And at the top of this chart, on the black line, at one offense there were 811 who had committed one offense or had been arrested for one offense.

By the time of the second arrest there were 572, which is almost a 30-percent drop. By the time of three arrests the cohort had dropped to 441. A 54-percent decrease.

By the time of the ninth arrest there were 102 youths remaining out of our original 811. And all the way along, at a steady rate, with the probability between 65 and 80 percent of continuing on to the next arrest, between any two arrests in the sequence.

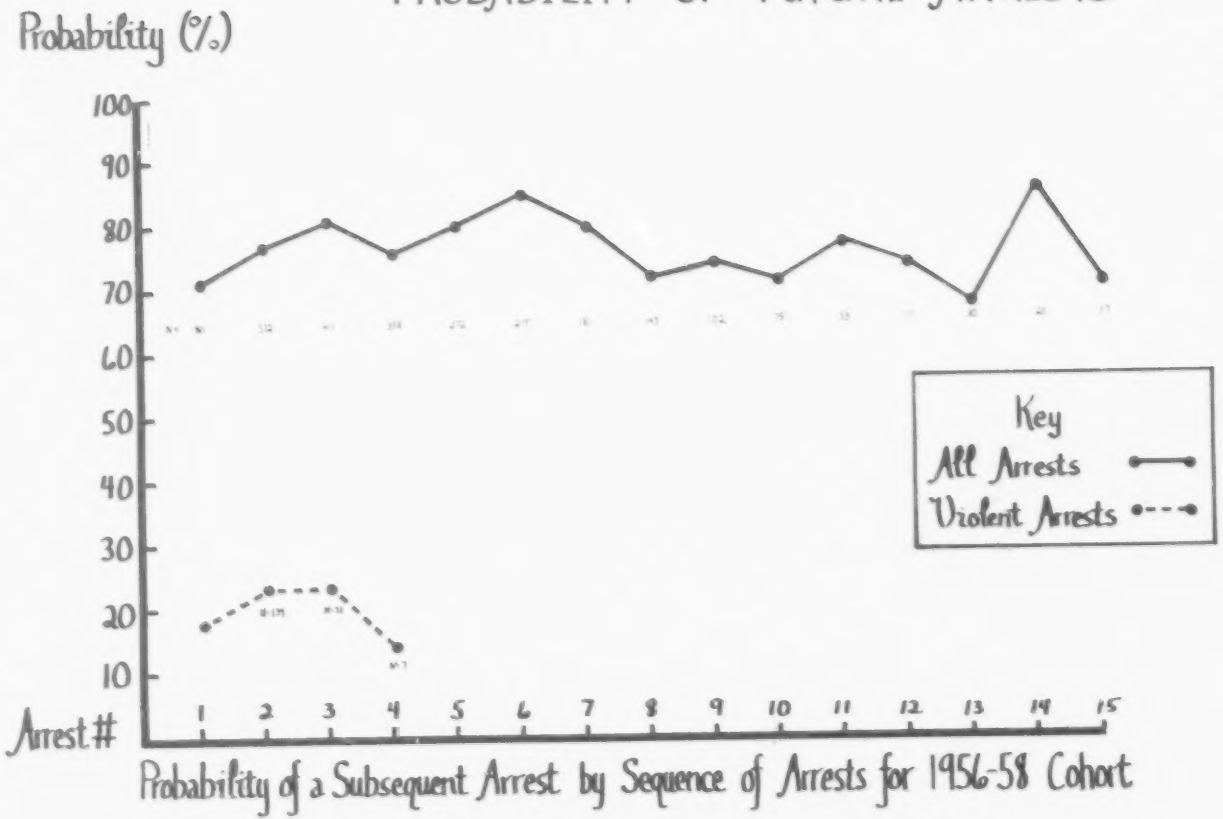
So from the first arrest to the second there was a 70-percent probability that those juveniles would be arrested again, a 30-percent fallout from the first to the second arrest.

Senator SPECTER. We see your figures and we can calculate the percentages. At what point would you think it most efficient to intercede?

Ms. HAMPARIAN. That is the other point I want to make.

Senator SPECTER. Are we on to chart 2?

88-489 O—82—7


PROBABILITY OF FUTURE ARRESTS
Probability (%)
100
90
80
70
60
50
40
30
20
10
Arrest #
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
Key
All Arrests
Violent Arrests
Probability of a Subsequent Arrest by Sequence of Arrests for 1956-58 Cohort

Ms. HAMPARIAN. Yes. That just shows you probabilities from any arrest to the next, but they are always in that range of 65 to 80 percent probability of continuing on to the next arrest.

Senator SPECTER. So the conclusion is that you cannot tell?

Ms. HAMPARIAN. No. The conclusion is you can't tell which of the 100 percent will go on, but there's a strong likelihood that a significant percentage of them will continue on.

Senator SPECTER. But if we have to draw a line and go after people at one point or another, which arrest would you choose?

Ms. HAMPARIAN. I think that is too simplistic. I think you need a relationship between the severity of the offense and the number of previous arrests and that there should be some rational sentencing structure—and I am not talking about incarceration. I am talking about a full range of sentencing options, so that a juvenile who, at his first arrest, committed robbery and was slapped on the hand and nothing happened to him and he thought this is the way the system will deal with me——

Senator SPECTER. Where would you define it, after the third arrest?

Ms. HAMPARIAN. I would define it after the first arrest, if the first arrest came within a certain range of seriousness, that he should receive a punishment, if you like—restitution, community service.

Senator SPECTER. And what is the degree of seriousness you would define?

Ms. HAMPARIAN. I think I would include a personal offense or, perhaps, burglary of an occupied dwelling. I'm not suggesting sending him to a training school, but something needs to happen so that he understands that what he did——

Senator SPECTER. So you would define the juvenile we devote our resources to change as a personal offense or a burglary of an occupied dwelling?

Ms. HAMPARIAN. No. If we are talking about punative treatment, then I think the evidence would indicate by the time the juvenile reached his fourth or fifth arrest that he had to be treated more intensively.

Senator SPECTER. Fourth or fifth arrest?

Ms. HAMPARIAN. Yes, and I think that is in line with what most of the evidence would suggest, but I don't think that by suggesting that I am saying that nothing should happen when he is adjudicated a delinquent for a first offense, if it is a serious offense.

[The prepared statement of Ms. Hamparian follows:]

PREPARED STATEMENT OF DONNA HAMPARIAN

John Monahan, after an extensive review of the studies on prediction, concludes that:

> Despite its ineffectiveness, it is highly unlikely that prediction will cease to play a major role in juvenile justice. One cannot attempt to rehabilitate juvenile offenders without first predicting which of them is in need of rehabilitation.[1]

One stops attemtping to rehabilitate juvenile offenders primarily on the basis of a prediction that a risk of violence has decreased. Despite the fact that the technology of prediction is in its infancy and the false, positive problem is a serious ethical issue, there are important reasons for not abandoning treatment with regard to juveniles committing violent offenses.

Paul Strasburg, in The Violent Delinquents, sums it up as follows:

> Release to the community with no treatment or control may invite further violence and certainly invite a backlash of public opinion. Simply locking violent delinquents in prison . . . contradicts what we know about the destructive effects of that approach.[2]

The Dangerous Offender Project at the Academy for Contemporary Problems in 1976, recognizing the need for information on juveniles committing violent offenses, undertook a study to answer two basic questions:

(1) What are the social and criminal characteristics of juveniles arrested for violent crime?

(2) What relationship do these characteristics bear to identifiable violent career patterns?

Our study was directed to an understanding of the problem in the interests of achieving an effective and coherent policy. Within the boundaries of such a

---

[1] J. Monahan, "The Prediction of Violent Behavior in Juveniles," in Proceedings of a National Symposium on The Serious Juvenile Offender, Minneapolis, 1977.

[2] P. A. Strasburg, Violent Delinquents. New York: Monarch, 1978.

policy, the effort to modify the behavior of the individual youth must continue. As Sellin and Wolfgang have insisted in recent years, delinquency varies enormously as to seriousness, and these measurements must be made before any measurement of the dependent variables of success or failure can possibly have any meaning.

This testimony will include, therefore, a brief discussion of the methodology, pertinent findings and conclusions of the cohort study of juveniles arrested for violent offenses, using excerpts from The Violent Few to provide data to address the issue of prediction of violent juvenile behavior.[3]

Our study concerned each and every juvenile in Columbus, Ohio, born in the years 1956 to 1960 who was arrested at least once for the commission of a violent offense up to age 18.[4] These five birth years yielded 1,138 youth who had been arrested for at least one personal offense. We collected the entire arrest histories of these cases--crime, victim, prosecution, disposition, sentence, release and recidivism. In addition, we knew the sex, race, socioeconomic status, family composition and other recorded information.

We were particularly concerned with the patterns of the juvenile career. By charting and relating age of onset, number, position, spacing and nature of delinquent events, it was possible to plot the differing forms of career development of juveniles arrested for violent offenses.

Following are the principal findings of the study.

Demographic Findings

A total of 1,138 youth born in 1956-60 were arrested for a violent offense or offenses in Columbus, Ohio before 1 January 1976. Of this total, 811 were

[3] Hamparian D. Schuster R. Dinitz, S. Conrad, J. The Violent Few Masschusetts, Lexington Books, 1978.

[4] Violent offense was defined broadly to include: murder, negligent homicide, rape and sodomy assaults, robbery and molesting.

born during the calendar years 1956 through 1958. (This group was designated as Subset 1.) The remainder, 327 youth, were born in 1959 and 1960. (This group was designated as Subset 2.) In 1970, this group ranged in age from ten to fourteen and constituted 1.34 percent of the total population of that age group living in Franklin County. Disregarding the girls in the population, we found that the boys in our cohort were 2.3 percent of the total number of boys in this age group.

The cohort was unevenly distributed over the county. Some census tracts contained many more cohort members than others; some contained none at all. The basic determinant of geographical distribution was socio-economic status. Those census tracts in which median income was less than 80 percent of the county median were heavily black and overrepresented in the study. Nearly a third of the cohort (32.4 percent) lived in ten tracts which contained only 7.8 percent of the total Franklin County population in this age group.

Males outnumbered females by almost six to one; 84.3 percent were boys; 15.7 percent were girls.

Blacks were overrepresented by four times their proportion of the Franklin County population. In the 1970 census, 12.5 percent of the total population, and 15.4 percent of the 10-14 age-range was black. But the cohort was 54.8 percent black.

The cohort came predominantly from homes with incomes less than the county median. Only 14.3 percent came from homes in which family income exceeded the median.

About half of the cohort came from homes in which both parents were present. About one-third came from homes in which only the mother was present. The rest were scattered in various other arrangements.

A considerable number of youth (12.2 percent) had siblings who were also part of this study, despite the relatively brief span of years included in the cohort.

The Chronic Offender

If there were a substantial number of youth who repetitively committed violent acts, their delinquencies did not come to the attention of the police. Over four-fifths (83.5 percent) were arrested only once on a charge of violence. Only 3.8 percent were arrested on such charges on three or more occasions. These repetitively violent young people accounted for 10.4 percent of the violent arrests. We had no way of knowing how far this finding could be generalized to other cities. Twenty-two youth were arrested for two or more aggravated offenses in which physical harm was threatened or inflicted.

Using the definition supplied by Wolfgang and his associates, we found that about a third of our cohort qualified as chronic offenders by committing five or more offenses. Chronic offenders were predominantly male, by a ratio of more than eleven to one. Only 13 percent of the girls became chronic offenders, while 34 percent of the boys qualified. As to race, the division was fairly even: of the blacks in the cohort, 30.2 percent were chronic offenders, as compared with 31.9 percent of the whites.

They came mostly from the lower levels of socio-economic status. Less than ten percent came from families living in higher income census tracts. It should be added that their geographical location did not assure that their families enjoyed incomes equal to the average for their neighbors.

As we expected, our chronic offenders represented a much larger fraction of the cohort than was the case with the delinquent third of the Philadelphia

birth cohort. Inspection of their records showed that their delinquencies were not uniformly serious. Of the 353 members of this class, 101 committed nothing more grievous than a simple assault. The entire cohort was responsible for 397 aggravated offenses, of which 146 (36.8 percent) were committed by 121 chronic offenders. Or, stated another way, ten percent of the cohort (121 chronic offenders) were responsible for over one-third of the most serious violent offenses. Adding all other violent offenses, except assault and molesting to the picture, we had a total of 894 index crimes against the person for the whole cohort, of which the chronic offenders committed 401 (44.8 percent). Not every chronic offender, even in this cohort of violent offenders, was a serious threat to the community, but this end of the cohort was responsible for far more than its share of the most serious delinquency.

More than seven percent of the cohort had achieved chronic status by the age of 14. These 81 youth constituted an obvious burden of grave juvenile maladjustment, but their subsequent careers, as far as we could trace them, did not seem to have been disproportionately destructive. They went on to commit 9.3 percent of the aggravated offenses against the person. Their early start on delinquent careers did not threaten the community as much as it must have damaged themselves. Very few of this group had clearly terminated their delinquent careers before the age of 18. In one way or another, in prisons or jails or as welfare dependents, they and their like were all too probably permanent public charges.

The Linear Progress From Bad to Worse

The support for this notion was at best equivocal. If such a progression could be found, it held true for an unpredictable minority of cases. In fact,

29.5 percent of our cohort were arrested only once, while another 16.2 percent were arrested twice. No progress here; these careers came to an abrupt end, indicating only that a bad beginning may augur nothing at all. Where progress could be traced, there was a tendency for violence to appear during the first third of a delinquent career; this was true in 42 percent of those careers that went farther than a second arrest.

Some of our subjects started early and continued their violent careers throughout their minority. Considering violent repeaters only, of those who committed a second violent offense, over 40 percent of their offenses were at the same level of seriousness as the first offense, while 25 percent were less serious, and 31 percent more serious. There were too few who went on to third and fourth offenses to justify a generalization. Rules for prediction were not made of such stuff as this. For some youth, an early arrest may have set in motion a long succession of increasingly serious delinquencies, but these careers were an exception. So far as we could tell from our data, their dismal trajectory into the status of permanent clients of the police must have been largely attributable to bad luck. In addition, juvenile offenders were not specialists but drifted from one kind of offense to another, making all too possible the choice of a more serious crime when once the career was in progress and an opportunity presented itself.

Having said this much in favor of purposeful activity in behalf of the early delinquent, we must turn to an old wives' tale which our data exploded. The notion dies hard that curfew violators, truants, and runaways--that rebellious element of the juvenile population usually referred to as "status offenders"--are headed down a slope toward confirmed criminality. There was virtually no support for this myth in our data. Of our entire cohort, no more

than ten percent (about 120 individuals) began their careers with a status offense. That is a modest share, probably no more than the number of juveniles in the general population who at one time or another were "guilty" of a status offense. It is certainly an insignificant portion of the total number of status offenders processed by the juvenile court during the years in question. There were 599 "unruly" cases heard in the juvenile court in 1974 alone. Over their entire careers, our cohort members were unable to muster more than 120, a rate of about ten per year. Whatever is in store for the status offender, violent delinquency is one of the less important prospects.

A few of our cohort committed offenses of the utmost gravity. One of them was serving a life sentence at the time The Violent Few was written (1978). Repeated violent offenses were exceptional; we have already noted that only 22 individuals in the entire cohort (1956-58) committed two or more aggravated offenses.

Patterns of Violence

Violence was only part of the problem presented to society by members of our cohort. The entire roster of 1,138 youth committed a total of 4,499 offenses, of which 1,504 (33.3 percent) contained elements of violence. Subset 1, consisting of 811 youth, committed 3,373 offenses, of which 1,091 (32.3 percent) were violent. These figures were so closely comparable that we felt secure in restricting this phase of our analysis to Subset 1, thereby focusing on completed careers. In a related decision, we excluded the category "other violence," which consisted principally of cases of resisting arrest, carrying a concealed weapon, and manacing. There were 106 of these "other violent" offenses; our

analysis was limited to 985 violent incidents.

Of these 985 arrests for violence, 270 (27.4 percent) were for major crimes against the person. The distribution of these offenses was:

Offense	Number	Percent
Murder/manslaughter	15	5.6
Rape and sexual imposition	61	22.6
Armed robbery	34	12.6
Aggravated robbery	72	26.7
Aggravated Assault	88	32.6
Totals	270	100.1

We referred to these offenses as "serious violent offenses" to distinguish them from the rest, which consisted mostly of acts which neither inflicted nor threatened significant physical harm. Serious violent offenses were committed by 218 youth (26.9 percent of the subset), of which 203 were boys and 15 girls.

The 218 youth arrested for serious violence were distributed in three groups. There were 218 who committed only one such offense, 22 who committed two aggravated violent offenses, and three who committed three or more violent offenses.

Assault was the most common offense, accounting for 376, or 11.1 percent of all arrests. In addition, there were 88 aggravated assaults, for 2.6 percent of the arrests. Simple assaults made up 38.2 percent of all arrests for violence; aggravated assaults were 8.9 percent of the total.

These offenders were not specialists. Second arrests for violence were seldom for the same offense as the first. Even assault, by far the most common offense, was repeated in only 26.4 percent of the second arrests, and unarmed robbery was repeated in 31.0 percent of the second arrests.

There was no distinguishable pattern of progression for the subset. About one-third of the second violent offenders were arrested for more serious offenses on the second occasion, but a quarter were arrested for less serious offenses.

Although their numbers were small, the violent girls were significantly different from the opposite sex. The overwhelming majority (73.3 percent) of the 135 girls in the subset were arrested for assault and battery, as compared with not quite a third (32.6 percent) of the boys.

Youth arrested for homicide and armed robbery started their careers at a later age, on the average, (15.3 years old) than youth whose violent offenses fell into other categories.

Court Dispositions

We found that the use of a supressor variable indicates that individual case characteristics were more influential in determining disposition than were any of the readily quantifiable demographic or criminal history variables. This finding led to two significant inferences. First, the usual data of the arrest history, the easily reckoned items of race, age, sex, school achievement and socioeconomic status, were of no predictive use, except in the gravest cases in which disposition was so certain that no prediction would have made a difference. In thinking about this pessimistic conclusion, we had to keep in mind that our predictions were by hindsight and could not have been as successful if made by foresight. They were still far from sufficient for making decisions about the future of children in court. We were not so sanguine as to suppose that with amplified data of our own selection the accuracy of our predictions would improve to such an extent that they could guide a judge to better decisions.

Clinical predictions depending on personal characteristics have never proved to be reliable clues to the future, and our findings supported this skeptical proposition. Apparently, the combination of the standard face-sheet data and general impressions did increase the amount of variance which we could account for, but hardly more than an even money wager. So, we concluded that if there is no way of accounting for about 50 percent of the variance, we must assume that the fate of an individual must depend on elements beyond the forecaster's estimate. If the prediction of judicial disposition is beyond the capability of a statistical device, the prediction of case outcome must be at least as uncertain, if not more so. The juvenile justice system centers on a predictive process by which judges make estimates of a youthful delinquent's future. Our research was only one of many studies which led to the same conclusion: the power to predict is too weak to be a basis for decision-making. The response of the juvenile justice system must be based on entirely different criteria.

Implications for Prediction

There is little in the data to suggest that the ability to predict individual violent behavior is just over the horizon. Most juveniles arrested for violent offenses desist after one or two arrests. Most juveniles arrested for violent offenses are generalists and commit many more public order and property offenses than they do violent offenses; juveniles arrested for violent offenses do not start with minor offenses and with each arrest increase the severity of the offense. In fact, juveniles in the cohort were as likely to have been arrested for a personal offense in the first third of the juvenile career as the second third or the last third.

Recognizing that the individual's behavior cannot be effectively predicted with present technology, it is vital that the system of consequences should be predictable and that it should never be predictably unresponsive. When a youth commits an offense and finds that nothing adverse happens to him, he has no reason to desist from the commission of another. When his offense comes to the attention of the authorities and still nothing happens, he receives the message that society is indifferent to him and his behavior. He may do as he pleases and nothing will happen. The indulgent dismissal, the mere warning of some vaguely serious future eventuality if he comes into court again, or the nominal placement on probation, are the worst possible consequences. Nothing to worry about there, he will reason; he will probably have heard from others like him that he can take his chances, but those chances are slim that they will lead to unpleasant consequences. The possibility that incarceration may be down the road may be regarded as the luck of the draw. If it happens, many such boys will think of the experience as a confirmation of manhood, not as an occasion for reform.

A judge is limited in his range of choices. A youth can be packed off to a state training school for a few months, but any conscientious decisionmaker will be squeamish about commitment to such a facility except as a last resort. A court will gamble, too. It will seem better to turn the young offender loose again, in the knowledge that the odds are against him, than to send him to an institution where the damage may be irremediable. Our data uncovered numerous cases in which a boy was placed on probation for what seemed a major offense, only to be hauled off to custody for an offense of much less apparent significance. The court's patience was exhausted, the last chance had been fruitlessly given, the end of the road had been reached, and the commitment to the Ohio

Youth Commission had to be ordered if the court was to retain its credibility. An earlier intervention, preferably calling for realistic consequences administered in the community, would have better served the boy and the authority of the court.

Predictable Consequences

Discretion is the indispensable ingredient in the administration of justice. If it is removed from one decision point, it will be transferred to another. It is not possible to achieve justice without taking note of the individual circumstances of the offender. Convenience requires that classes of offenses be aggregated under a few headings; the law is ill-adapted to fine distinctions. It is the task of the court to search out the distinctions that make a difference and to allow for them in the disposition of cases. Every offense differs in the motivation of the offender, the nature of his participation, the harm done, and many other factors. Discretion is obviously necessary to allow for these relatively objective discriminations. A code of penalties which did not allow for mitigating and aggravating circumstances would be intolerably oppressive, and ways would be found to circumvent it.

But discretion should not be used to provide latitude for the court to act on its prediction of the youth's future behavior. Where this is done, and the practice is nearly universal, the system becomes unpredictable and idosyncratic. Even the youngest offenders become sensitive to the attitudes and typical decisions of judges. What they know is that the system is unpredictable, and our data show that they are right. The administration of justice invites the juvenile offender to play a game with it and with his fate.

Neither our study nor any other investigation has given any ground for supposing that any conceivable system of justice can build in the capability of predicting the future of any juvenile offender. If such predictions were within judicial competence, discretion to act on them would be a necessity. But where predictions are impossible, the attempt to make them becomes a corrupting enterprise. Public confidence in the integrity of the system is impaired to no good end. It becomes impossible for the offender to predict the system's response to him and his offense.

The human condition is a chancy state in which detailed regularities are not to be found. The prediction of anyone's future behavior is a calculation of the odds, not the charting of a process. There is every reason to believe that this will always be the case. The odds may be heavily in favor or heavily against the commission of a serious delinquent act, but a system that plays games will be the target of games. "The Lord God does not play dice," Einstein said, with reference to the quantum theory. Neither should a judge.

But if individual conduct is unpredictable, a system can be made as predictable as it needs to be. It can assure that the consequences of anti-social behavior demonstrate to the offender and to all who know about him that certain kinds of behavior are not to be done. Until such a system is achieved, juvenile delinquency is an exciting but unpleasant game played for unacceptably high stakes.

ADDENDUM

> We have passed the time when juveniles who commit serious crimes could automatically count on being processed through juvenile court. That is not a happy circumstance to contemplate, and it automatically validates human failure somwhere down the line. But treating vicious, juvenile criminals as criminals first and kids secondarily is a public policy which makes sober common sense. (Lincoln Journal)[1]

This statement reflects the policy being considered in many statehouses in the United States. What has brought us to this policy position? Between 1960 and 1975, arrests for violent juvenile crime increased over three hundred percent. Granted, at the same time total arrests of persons over 18 years of age for violent crimes began to increase slightly faster by 1972 and that the percentage of violent crimes attributable to persons under 17 years of age has not significantly increased or decreased since 1970. Nevertheless, the perception of the public reflected through the news media is that juveniles must be controlled and the most effective way of controlling juvenile crime is to treat them as adult criminals. The assumption is made that if juveniles are tried in adult courts, they will be punished through longer periods of restraint.

In the interest of assisting policymakers in their consideration of legislation and of trying to address some of the assumptions, such as longer incapacitation, the Academy for Contemporary Problems, in 1979, began a three-pronged study of youth tried in adult courts. First, we conducted a census in every county in the United States on the frequency of referral of persons under 18 years of age in the year 1978. In a sample of counties, data on age, sex,

---

[1] Lincoln Journal, Lincoln, Nebraska, editorial, December 7, 1979, reprinted with permission of the Lincoln Journal.

race, offense, disposition and sentences were also collected. Legal research on age of jurisdiction, waiver, excluded offenses and concurrent jurisdiction, plus a review of the case law applying to these provisions, was also undertaken.

Second, we went into ten states and conducted personal interviews with court personnel, corrections officials, legislators, advocates and media representatives to ascertain the effects of trying youth in adult courts on the criminal and juvenile justice system, the offender and public safety.[2] And, third, we enlisted ten outside experts to write articles on the issue of trying youth as adults.[3]

What follows is a summation of the findings of the national census of youth referred to adult courts for trial in 1978.

There were four basic mechanisms for referring youth to adult courts in 1978.

First, and most common, was the judicial waiver. All states, except Arkansas, Nebraska, Vermont and New York, had such a procedure by which the court decided on a discretionary basis whether the juvenile was amenable to treatment as a juvenile and/or whether public safety required trial as an adult.[4]

Second, the legislature, by excluding certain categories of offenses from initial juvenile court jurisdiction, automatically referred juveniles arrested for those offenses to criminal court. In 1978, 32 jurisdictions had statutory

---

[2] Youth in Adult Courts: Between Two Worlds (Hamparian, et al.) will present the results of the study. It will be published late in 1981 or early in 1982 by the Government Printing Office.

[3] Hall, Hamparian, Pettibone, White, Co-editors, Major Issues in Juvenile Justice Information and Training: Readings in Public Policy. Academy for Contemporary Problems, 1981.

[4] Vermont added a judicial waiver in 1981.

88-489 O—82——8

provisions excluding certain specified offenses from juvenile court jurisdiction. Of these, 20 excluded only minor offenses such as traffic, boating, watercraft, and fish and game violations. In 1978, 11 jurisdictions excluded serious offenses, primarily capital offenses and other armed offenses.[5] The most talked-about excluded offenses provision was the New York Juvenile Offender Act of 1978 which initially excluded most armed offenses for which 14- and 15-year-olds were arrested and alleged murder by 13-year-olds. The New York Act, as with most of the statutes excluding serious felonies, permitted the prosecutor or criminal court to refer back to juvenile court.

Third, statutes providing for the exercise of some type of concurrent jurisdiction by juvenile and adult courts were included within the legal codes of 15 jurisdictions. In eight states, the concurrent provisions concerned only traffic, watercraft or fish and game violations. Three of the remaining seven states (Arkansas, Nebraska and Wyoming) provided for the exercise of concurrent jurisdiction over all offenses, felonies and misdemeanors, at specified ages. (Only in Wyoming did the provision cover any age for any offense.) In the other four states (Georgia, Colorado, Florida and the District of Columbia), concurrent jurisdiction existed over a limited number of offenses at specified ages.[6]

The fourth provision affected a large number of persons (16- and 17-year-olds) each year. In 1978, over a quarter of a million juveniles were arrested, detained, tried and sentenced as adults because the minimum age of criminal court jurisdiction was six or seven in 12 states. Four states--Vermont, New

---

[5] Oklahoma added an excluded offense provision in 1978.

[6] Georgia - any age, capital offense; Colorado - 14 years of age and major felony; the District of Columbia - 16 years of age and older, major felony; and Florida - 16 years of age and older, repeat felony offenders.

York, Connecticut and North Carolina--ended juvenile jurisdiction when a juvenile reached his 16th birthday. Eight states included all 17-year-olds within the adult criminal justice system.[7] Except in Vermont, where the criminal court could refer a 16- or 17-year-old back to juvenile court, these young people had lost the "privilege" of being handled as juveniles for any offense.

Although the data are still being analyzed, we can suggest a few of the findings from the study as follows:

- Males represented between 84 and 95 percent of the referrals to adult court. A higher proportion of females were referred to adult court in the states with a lower age of jurisdiction than through judicial waiver, excluded offenses or concurrent jurisdiction.
- Personal offenses (crimes against the person) represented a small percentage of the offenses resulting in referral, about ten percent in the 16- and 17-year-old states and about 30 percent through concurrent jurisdiction and judicial waiver states. Public order offenses accounted for over 17 percent of the judicial waivers and over 35 percent of the 16- and 17-year-old adults. (This pattern was different for excluded offenses. Most of the juveniles initially excluded from juvenile court jurisdiction for serious offenses were charged with personal offenses.)
- Property offenses resulted in the most referrals--44 percent in judicial waiver and concurrent jurisdiction and 28 percent of the 16- and 17-year-old adults.

---

[7] Georgia, Illinois, Louisiana, Massachusetts, Michigan, Missouri, South Carolina and Texas.

- Some states judicially waived a large percentage of public order cases; e.g., Oregon and some states such as Ohio almost never waived such offenses. (Of course, statute language restricted who could be referred.)
- In those states with a high frequency of public order waivers, a high proportion of sentences of fines were imposed.
- The older juveniles--17-year-olds--represented the majority of those judicially waived, but about nine percent of those judicially waived were 15 years of age or younger or were referred under the prosecutor's discretion.
- Almost all youth judicially waived were convicted in adult court (91 percent).
- Youth convicted in adult court after judicial waiver were more likely to receive probation and/or a fine (54 percent) than a sentence of jail or juvenile or adult corrections (44 percent). There was significant variation in this pattern between states.
- The sentence length for some juveniles judicially waived was very long. Fourteen percent received maximum sentences over ten years; two percent received life.

What could have happened to the youth who were incarcerated?

According to personal interviews conducted with all 52 adult and/or juvenile corrections departments, juveniles tried in adult court and given an incarcerative sentence could only be placed in adult corrections facilities in most states and in juvenile facilities in a few states until reaching "criminal majority" in those states. Generally, youth could then be transferred

to adult facilities to serve out their terms. In certain states this must have been stated in the original court sentence. In about 10 states a youth tried in adult court could be placed in either a juvenile or adult facility. Special permission was sometimes required. Back we come to our 16 and 17 year-old adults in the 12 states with under-18 age of juvenile court jurisdiction. If incarcerated, they would be placed in adult facilities. Many states had passed youthful offender provisions that provided special programs and/or shorter sentences for the young adult. Nevertheless it was an adult facility with rehabilitation or services as a secondary consideration.

Most legislatures had considered new approaches to the "serious juvenile crime problem." Many more pieces of legislation had been introduced than had been passed. For example, Wisconsin had been considering a dozen separate pieces of legislation dealing with these problematic youth.

The most interesting trend in the last five to ten years was a decrease in the number of states with an age of initial juvenile court jurisdiction below the age of 18. Six states had increased the age of jurisdiction to 18 and Vermont had been considering such an increase.

At the same time, the juvenile court discretion was being restricted with the addition of factors to be considered in judicial waiver, written reasons required, and age and offense categories specified in the code.

Additional changes were as follows:

- The role of the prosecutor had been increased in judicial waiver provisions and in juvenile court generally.
- The burden of proof had shifted in several states for serious crimes, from the state having to prove nonamenability to the offender having to prove amenability.

- Some states had added mandatory hearing provisions for juveniles charged with serious crimes with a serious juvenile history.
- Minor misdemeanors, such as traffic, boating, fish and game violations, were increasingly being excluded from juvenile court jurisdiction.
- There was increased questioning of the need for a separate juvenile court system with the removal of status and minor offenses from one end and the removal of serious offenses from the other end of the continuum.

But perhaps the most important change was the stated goal in most of the recent legislation that a juvenile could be waived if he was not amenable to treatment as a juvenile or that the public safety would not be served by retaining jurisdiction."

Senator SPECTER. Dr. Farrington, do you have anything you would like to add?

Mr. FARRINGTON. I think the only thing I would like to say, from what I was prepared to say, is that delinquency is not an isolated phenomenon. It's usually part of a much wider syndrome which typically begins in childhood and continues into adolescence and into early adulthood. You get a pattern of multiple adversities in the children and their families.

When they grow up, you have a pattern of different aspects of deviant behavior, of which property offending, a typical crime, is only one element. Because of the continuity between childhood, adolescence, and adulthood you can predict to some extent.

The other thing I would like to say is, just to make it clear that everything I have been saying is my own personal view, and although I am a visiting fellow at the National Institute of Justice, anything I say should not be taken as necessarily reflecting the view of anyone else at the National Institute of Justice.

Senator SPECTER. It should not be held for or against them?

Mr. FARRINGTON. It should be taken as my own personal view.

Senator SPECTER. It should not be held against them? [Laughter.]

Dr. Patterson?

Mr. PATTERSON. Well, I would just like to comment briefly on the——

Senator SPECTER. Dr. Farrington, before you leave I would like to thank you for being here. We are fortunate to have you here in your capacity as a fellow at the National Institute of Justice here with the Department of Justice.

We know of your excellent work with Cambridge University's Institute of Criminology and we are very grateful to you for coming across town. We are glad we did not have to impose upon you to come across the ocean, but we will be in touch with you further

and as we terminate this panel I would like to also thank Dr. Patterson, who has come all the way from Eugene, Oreg., where he is a research scientist with the Oregon Social Learning Center, and Ms. Hamparian who has come from Columbus, Ohio. Perhaps we can impose upon some more of your time this afternoon and in the future to explore with Bruce Cohen, the chief of my staff, and others some of these issues further.

It is always difficult, and I know you have been interviewed extensively, to really focus on what it is that the subcommittee has in mind, but we would be very grateful if you can shed any further light on the essential questions which have been raised today, and that is, with as much as we know now, how do we deal with juveniles in identifying potentiality for career criminals and what we then do.

As a subordinate question—and I want Mr. Cohen to hear this, although he is monitoring the Appropriations Committee—studies might be fashioned with some of the money currently available which could shed further light on this subject.

So thank you very much, Dr. Farrington.

Mr. FARRINGTON. I am honored to have been here.

Senator SPECTER. Thank you.

Concluding statement, Dr. Patterson?

Mr. PATTERSON. I would just like to comment briefly on the consensus I was alluding to some moments ago. The fact that investigators are agreeing on variables, concepts and measures I think is encouraging.

There is a momentum to the study of antisocial children and their families that has been building now for a decade. It is contributed to by at least five or six groups in this country and several groups in Europe. I think it would be a shame if that momentum were lost, so I am, of course, urging consideration for funding of high quality research in this area, subjected to peer review.

I think that is also extremely important.

Senator SPECTER. Well, we are very appreciative of the efforts of the National Institute of Juvenile Justice and Delinquency Prevention at OJJDP, as well as the National Institute of Mental Health's Center for Crime and Delinquency, both of which have pioneered and financed these important studies. There is quite a lot going on in the appropriations process and the funding process, and I believe that it is possible, through enough effort and enough demonstration of practical utility, to save some of these programs. These cuts are not etched in granite. They can be preserved if sufficiently persuasive arguments are advanced for their retention, and I have been and will continue to work to do that. And I have a lot of colleagues who share those sentiments.

So thank you very much. I very much appreciate your being here.

I would like to call now Dr. Stanton Samenow, clinical psychologist, member of President Reagan's Law Enforcement Task Force, and Mr. Archibald Murray, attorney in chief and executive director of the Legal Aid Society of New York. And Dr. Monahan, Mr. Cohen suggests you might sit in on this panel, too.

Dr. Samenow, welcome to the panel and we would be pleased to hear your statement and, to the extent you can focus in on the

issues we have directed our attention to, I would personally be appreciative.

STATEMENT OF DR. STANTON SAMENOW, CLINICAL PSYCHOLOGIST, MEMBER, PRESIDENT REAGAN'S LAW ENFORCEMENT TASK FORCE

Mr. SAMENOW. I will scrap my opening statement and respond specifically to what has been going on in this room this morning.

Senator, you want something that is "persuasive and tangible." Those were your words. You want to do something now and act today, and I am in sympathy with that. I don't agree with Dr. Monahan that we don't know anything, but we do not know much when it comes to prevention. If you are talking about early intervention with people who are known offenders, that is another matter.

I was a part of a 17-year study. I was a part of it for 8½ years, probably the longest-term study done in this continent, in which we spent up to 8,000 hours with adult criminal offenders. I won't go through that story. That would keep us here on into the night. But we certainly did find in that study that there are consistent patterns of thought and action in the people that we dealt with, regardless of their background.[1]

By the way, the people we dealt with were one-man walking crime waves. They were career criminals. These are people who, I don't care how you define it—the numbers of crimes, the seriousness of crimes, the diversity of crimes and the earliness with which they began—they did in fact make a career of it.

But we had to piece together some things retrospectively, so we don't really know how it all began. I am not in agreement at all with those who say that to prevent delinquency we should take money and try to improve social circumstances and launch into social programs. That was the thrust of the efforts in the 1960's and 1970's which yielded few results.

Delinquents come from all walks of life—from broken homes and intact homes. We dealt with people who came from a wide variety of backgrounds. What emerged is there are a series of patterns of thought and action which, in our group, emerged as early, in some cases, as the preschool years.

I was quoted in the Los Angeles Times as saying I could take a 5-year-old and predict whether he would become a career criminal. I cannot. We are not there in our knowledge.

You talked about or you alluded to something in Philadelphia in which—as I understand it—as part of a probation program it was mandated that juveniles and their families sit down with counselors. That is where we are, I think, on early intervention.

But it is a shocking situation in this country, and I have spoken in some 37 States, as to what actually passes for probation and counseling. Probation in its present form is often a farce. It is a sham and what has gone on is that the kinds of interventions that could be made in the community, at least with some of these kids,

---

[1] These findings are presented in two volumes: Yochelson, Samuel and Stanton E. Samenow. "The Criminal Personality: A Profile for Change." N.Y.: Jason Aronson, 1976. Yochelson, Samuel and Stanton E. Samenow. "The Criminal Personality: The Change Process." N.Y.: Jason Aronson, 1977.

are not being made. What is probation? You see a probation officer for 20 minutes or one-half hour every 3 weeks. The push is more toward paperwork than people.

I would recommend, if you want to talk about early intervention, that the kind of things you referred to in Philadelphia, that that kind of effort be beefed up, that probation have some meaning.

Senator SPECTER. What should it consist of, Dr. Samenow?

Mr. SAMENOW. I think what it should consist of is this: One, probation officers should be more than monitors and paper pushers. I think traditionally the role of the probation officer, as it was conceived long ago, was not only to monitor, which was necessary, but also to counsel. I'm not talking about turning them all into shrinks—God forbid.

I am talking about having them have the time and opportunity to sit down and talk with a youngster frequently and with his family frequently. I am talking about a youngster who has been arrested for a felony. As it is now, he comes into the court and regards probation as a joke. The lore about probation floats around, and the kids have a laugh. They get off free as far as they're concerned.

There's a suburban county here in Arlington, Va., that is trying to make a stab at really having the probation officers do this. They try to see the kids as often as possible. In some cases they mandate counseling even outside the court if the court can't provide it.

I do agree with whoever said it—Dr. Patterson—that for the chronic antisocial adolescent it is too late. I am asked to counsel kids sent to me by the court and I am known for dealing with tough cases, so I get these chronic cases. It is like catching a tidal wave with a bucket to try to counsel someone once a week at that point in their lives.

I think we have to move back in time. It was interesting you chose the 9-year-old. I don't know if you had a reason for it, but certainly by age 9, around the fourth grade, there is a developmental level, there is a conceptual level where I think some of this counseling can be done.

Senator SPECTER. What age would you pick, Doctor?

Mr. SAMENOW. I would say 8 or 9.

Senator SPECTER. How successful are you in catching the tidal wave with a bucket, by the way?

Mr. SAMENOW. Not very. I tell you in all candor I probably do more to help the families and parents and teachers cope with the situation.

Senator SPECTER. What do you need for a tidal wave? What's the minimum with which you can catch the tidal wave?

Mr. SAMENOW. I think I need two things and unfortunately they are in short supply in this day and time. It's time, more intensity—of course, that's more money—and it also means a more consistent hand of the court.

In other words, when I see a kid, if the legal leverage from the court is minimal or a joke, I am not going to accomplish much with this teenager. Now I'm not working with 8- and 9-year-olds. Unfortunately, I don't usually get to see them. I think that is where the work should be done and I do think what Dr. Patterson was talking about has some merit.

He said this: He said there are things that these kids do that all kids do but these kids do it with higher intensity. In other words, OK, there's larceny in every soul or, as President Carter said in that infamous Playboy interview, lust in every heart. Every kid who steals a candy bar doesn't become a career criminal. Consequently, I can't talk about the 5-year-old or the 4-year-old.

But there is a world view that emerges—the kind of kid who views the world as a chessboard in which property and people are to be moved about at whim and will, the kind of kid who fails to develop a conscience, the kind of kid who seeks power and control for its own sake, and I could go on and list a lot of other things in a 500-page book I have coauthored. I will spare you that.

But there is a world view. I think that teachers——

Senator SPECTER. You may spare me, but you will not spare Mr. Cohen. [Laughter.]

Mr. SAMENOW. That's all right. I would be glad to talk with him. I agree with Dr. Patterson. The teachers, the families, the community know many of these kids. He talked about referral by community agencies, not necessarily after arrest.

His implication is that you can intervene in the lives of some of these kids without stigmatizing them. Now I have confused two things here and I had better separate them.

One is the kid who already has been arrested, and I will go back to what you talked about that they are doing in Philadelphia. That type of effort must continue. The kid who has been arrested, the probation officer having the chance to be a counselor as well as a monitor.

Now I have just shifted into something else. I am saying there are kids who are stealing, lying, fighting, who have this world view. Others know it. Others see it. We don't want to tag them as little criminals, but what we do want to do is to try to refer them somewhere.

You ask me where. Well, probably the kind of clinics that Dr. Patterson—I don't know his work, but probably the kind of thing he has been doing.

Senator SPECTER. What do you think the prognosis is for getting a wave of voluntarism, as the President has urged, from psychiatrists, lawyers, psychologists and community groups?

Mr. SAMENOW. Oh, we are pretty selfish. I don't know. I'd like to say to you yes, I think there's a good prospect of it. I think there is some. I'm not terribly optimistic about that. I would hope there would be some.

But let me say this. You know, you keep hearing about community corrections and the desire to divert kids from the juvenile justice system, and there are people working in community health clinics. There are probation officers. There are people around.

OK, you can always say we need more of them, but the kind of thing Patterson was talking about, the screening, assuming you can get cooperation, well, if you can't you may have to wait until after the first arrest.

Now this business about the fifth arrest, the fourth arrest, the third arrest, my view is if a youngster has committed a single felony that's serious. Often the first arrest is the tip of a massive iceberg of other crimes for which he has not been caught.

Senator SPECTER. Where would you intervene?

Mr. SAMENOW. At the first felony—right there. As I said, if you can enlist the families earlier and through teacher identification and so forth, at least to have someone take a look at these kids, if possible, even before the first felony.

Senator SPECTER. Dr. Samenow, I am reluctant to interrupt you, but I am afraid if we don't turn to Mr. Murray we will run out of time.

Mr. SAMENOW. May I make one more quick comment? It will be very fast.

Senator SPECTER. Surely.

Mr. SAMENOW. The history of corrections is 150 years of undocumented fads. That's not my statement. George Beto, a Lutheran minister and former commissioner of corrections in Texas, made that.

Senator SPECTER. 150 years of what?

Mr. SAMENOW. Undocumented fads. It's been do something now and do it fast. If you and your committee want to do something very worthwhile, I agree with Dr. Patterson—more research. I know we researchers always say more research, but there is nothing going on, to my knowledge, in this country that is long term, that moves back in time to look at this world view that we saw in our adults—these patterns of thought and action—to try to systematically understand more about their emergence.

I would ask you and the committee to consider something small—not a lot of money—a small, long-term study—5 years, 10 years. I will conclude.

Senator SPECTER. I would be interested in your specific suggestions and I will ask Mr. Cohen to follow up with you on your specifics.

Mr. SAMENOW. All right.

[The prepared statement of Mr. Samenow follows:]

PREPARED STATEMENT OF STANTON E. SAMENOW

I participated in the longest indepth study of criminal offenders that I believe has ever been conducted in North America. With Dr. Samuel Yochelson, now deceased, I studied in detail the patterns of thought and action that lead to and characterize criminal behavior. Our study was based at Saint Elizabeths Hospital in Washington, D.C. We studied offenders from a variety of backgrounds, but all were heavily involved in crime from an early age. Our findings are reported in the three volumes, The Criminal Personality. We developed a "habilitation" (not re-habilitation) program in which we were successful at helping some career criminals make lasting changes in their thinking and action so that they became responsible citizens.

After our work was on "60 Minutes" in 1977, I was beseiged by people asking whether or not something could be done earlier to help identify youngsters who might turn out like the adult criminals in our study. In other words, could something be done that would be preventive, rather than society's sustaining untold injuries and then costs in reforming or simply incarcerating these people.

Unfortunately, as George Beto, both a Lutheran minister and former director of Corrections in Texas, stated: "The history of corrections is 150 years of undocumented fads." There has been no long-term research-treatment study with juveniles comparable to our study with adults to address the prediction and early intervention problem.

We became convinced that criminals are not simply products of their environments. They were not shut out of the mainstream. Rather, they rejected their parents, teachers, and the world of responsible people long before being rejected. These people were victimizers, not victims. Criminals have a certain view of themselves and view of the world. We developed a detailed profile of how criminals think. Their behavior is a product of that thinking. Perhaps we all have larceny in our soul and

share some of the characteristics that criminals evidence, but the person who lies as a way of life, who pursues power and control for its own sake, regards the world as his own personal chess board, and has almost no concept of injury to others -- that individual ends up with a different view of the world and requires different measures to deal with him than are now being used.

I believe that with further study over time, it will be possible to identify the early thinking and action patterns in children that will result in criminal behavior. (In fact, I have moved back in time in my current work and am now seeing teenagers and children in a clinical setting who are already offenders.) The early identification can be done without labelling and thereby stigmitizing children. Just as we try to identify learning disabilities and other problems when children are young, so a similar attempt should be (and must be) made in the area of crime. As more information is gleaned in this area, it should be possible to develop intervention strategies and also to determine when the best intervention is no intervention at all (i.e., some kids do pass through brief stages of mild delinquent behavior).

Our 17 year study at Saint Elizabeths showed that criminals do think differently and that these differences (from their responsible peers) showed up early.*

Efforts in this area will require not another shotgun approach and throwing money at a problem in large amounts, but rather meticulous planning in a long-term effort to come to grips with a pressing social problem. Such a project does not require vast amounts of money -- only a staff of committed people and freedom from arbitrary political pressures and deadlines. Can society afford not to engage in such an effort?

---

*The findings of the Yochelson-Samenow study are contained in: The Criminal Personality: A Profile for Change, NY: Jason Aronson, 1976. The Criminal Personality: The Change Process, NY: Jason Aronson, 1977. The Criminal Personality: The Drug User, in press.

Senator SPECTER. Mr. Murray, welcome. Thank you for being so patient. We are very pleased to have you here and look forward to hearing from you.

STATEMENT OF ARCHIBALD MURRAY, ATTORNEY IN CHIEF AND EXECUTIVE DIRECTOR, LEGAL AID SOCIETY, NEW YORK, N.Y.

Mr. MURRAY. I am perhaps the only person here not a social scientist. I hope you will forgive me for taking a different approach to the entire subject matter. I will also try to be brief.

I find, amazingly, that people are willing to rely on predictors which are not working. It seems to me that we are far too quick to identify youngsters as being susceptible of becoming adult criminals and satisfied with a system of prediction that is no better than 50-50. That, it seems to me, is totally incompatible with a system of government based upon ordered liberty.

I am concerned about the liberty interest of that individual into whose life we are about to intrude. It is not as if all of the intrusions that we have been talking about today are going to be benign. In fact, I think many of the witnesses have indicated that they are not really clear about what the impact of the intrusion will be.

If we were to shift from social science, still using the treatment model, and move over to the physical sciences, I don't think anyone would be satisfied with a drug being put on the market which was no more reliable and valid than the prescriptions that we are offering here in the social science context.

It seems to me that beyond the lack of certainty in the predictions that we are offering there is also the problem that the programs and the techniques being offered do suggest serious potential for exacerbating some of the divisions that exist within our society—both racial and economic.

Some of the witnesses have indicated that part of the predictors that they use are traceable back to race and socioeconomic circumstance and gender. I would suspect that by those standards I should have been labeled a criminal a long time ago.

It seems to me we are entering rather dangerous territory. I am urging that we do so with great caution. I would suggest to you that the so-called services that are being offered are, by no means, validated cures, and until we know more about their likelihood of success, we ought to be far more cautious in putting them forward as prescriptions.

Senator SPECTER. What do you suggest? What should we do?

Mr. MURRAY. At a minimum, if you are going to offer services, I suggest we limit ourselves to dealing with young people who have been adjudicated. We are talking about trying to identify kids in the community who, as far as I can tell from the testimony, have not been convicted of anything.

Senator SPECTER. That has been some of the testimony, but we probably cannot deal with all of those who have been adjudicated delinquents.

Mr. MURRAY. Then, select some of them who have been.

Senator SPECTER. How many times adjudicated? Although adjudications of delinquency do not say with particularity for what, we

can look behind the record or the juvenile court judge can and make a determination.

If you are adjudicating for alcoholism we would not necessarily bring to bear these limited resources we have, but at what point would you move?

Mr. MURRAY. If one is going to limit oneself to dealing with youngsters who have been adjudicated, I would suppose you would want to deal with those whose behavior seems to pose the most serious threat to the community.

I think you would be looking at kids who have been adjudicated delinquents, but only with those acts of delinquency that involve violence.

Senator SPECTER. And how many such acts of delinquency?

Mr. MURRAY. Perhaps a couple.

Senator SPECTER. And at what age?

Mr. MURRAY. At any point in the system when that child is passing through the juvenile justice process after adjudication.

Senator SPECTER. What is your judgment regarding a point of no return? Is 14 too late? Is 12 too late? Do we have to start at 8 or 9?

Mr. MURRAY. I should underscore I am not a social scientist. I'm not good at predicting those kinds of things.

Senator SPECTER. You are attorney in chief and executive director of the Legal Aid Society of New York. How many lawyers do you have?

Mr. MURRAY. There are about 600 lawyers working there.

Senator SPECTER. How much experience have you had in the criminal justice justice system?

Mr. MURRAY. I have been a lawyer for about 21 years and most of it has been involved in the criminal justice process.

Senator SPECTER. Then we accept your credentials and repeat the question.

Mr. MURRAY. I would suggest a couple of things. One is that labeling not only damages the person's image of himself but it causes those around him to regard him differently and deal with him differently. A very small illustration of that happened to me a few days ago. It seems to me that every time you get a wave of reports of crime against cab drivers in New York City one of the predictable things I have now come to be able to forecast is that I will not be able to catch a taxi.

It's that simple and I suggest to you that before we move into some area such as this and run the risk of doing an enormous damage to people we ought to proceed with greater caution.

Senator SPECTER. You are opposed to taking 1-month-olds away from their parents?

Mr. MURRAY. I don't suggest that, unless, perhaps, of course, the child is in grave danger of loss of life. Clearly that might offer a basis for removing the child. But if the point is that someone else would be a better parent to raise the child, that is not a basis.

Senator SPECTER. What would the legal impediments be? I suppose the fact could be severe enough to do that, but that would be a pretty tough thing to do.

Mr. MURRAY. It would be very tough. I would suppose you would have to have a life-threatening situation. It certainly could not be

on the basis of someone deciding that parent A would be better than parent B.

Senator SPECTER. It is an interesting thought. I have never seen that done. Have you?

Mr. MURRAY. Removal of a child at 1 month?

Senator SPECTER. Removal of a child. I have never seen it done at any age on the ground that the home is so potentially dangerous to the child.

Mr. MURRAY. We had one that almost happened, and the child did die.

Senator SPECTER. If there is a case of child beating, the remedy is to arrest the child beaters and to prosecute and convict.

Mr. MURRAY. And that leads you to having to do something with the child.

Senator SPECTER. I have seen a lot of those cases in Philadelphia. We prosecuted those in great numbers, but I never saw the corollary. I recall the prosecution of both the father and the mother, but I do not recollect what happened to the youngster.

The sentencing in those cases, as is the sentencing in almost any kind of case, is so insufficient.

Mr. MURRAY. Our system in New York is slightly different. We deal with cases of child abuse and neglect in the family court and our juvenile rights division the head of which is here with me, becomes the law guardian, responsible for representing the interests of the child. Where the circumstances are severe enough the child may well have to be removed from the home.

Ms. Gittis, the head of the juvenile rights division, is here.

Senator SPECTER. But you have not seen such a case?

Mr. MURRAY. Not at age 1 month.

Senator SPECTER. At what age?

Mr. MURRAY. Baby Lenore was how old?

Ms. GITTIS. She was under 2, as I recall, but they have been removed at the age of 1 month when there is a severe danger in the house.

Senator SPECTER. You have seen such a case, Ms. Gittis?

Ms. GITTIS. Oh, yes, for a number of years.

Senator SPECTER. There has been another interruption, Mr. Murray. A vote has been signaled. I must leave here in about 5 minutes to vote. It is one of the fascinating things about this job. You have to be in so many places at once and it really is interesting.

Mr. MURRAY. Thank you. I would suggest that before we move into these areas we recognize one other shortcoming in the entire process.

It is that the literature I have been able to examine so far suggests that statistical predictions are far more reliable than the clinical predictions and while I think statistical predictions are all right for determining what my insurance rate should be, it is not a satisfactory basis for acting on the liberty of an individual.

It's all right for making predictions about groups, but when we're talking about liberty we are not talking about groups, we are talking specific individuals.

[The prepared statement of Mr. Murray follows:]

PREPARED STATEMENT OF ARCHIBALD R. MURRAY

I am Archibald R. Murray. I am the Executive Director and Attorney-in-Chief of The Legal Aid Society in New York City. The Legal Aid Society is a private non-profit agency which for 105 years has been providing legal representation to the poor of the City of New York. With a full-time legal staff in excess of 600 and a caseload in excess of 225,000 annually, the Society is the largest and oldest provider of legal assistance to the indigent in this nation. Under agreements with city, state and federal authorities the Society serves as defender in the state and federal court systems at both trial and appellate levels and as law guardian for juveniles in delinquency, status offense and child protective proceedings. Through its Civil and Volunteer Divisions the Society also provides civil legal assistance to poor New Yorkers. It is from this perspective that I come to speak before you today.

Well ahead of Gault, New York began to accord recognition to the fundamental rights of children. Approximately twenty years ago, after the publication of a seminal study undertaken by Charles Schinitsky, who subsequently became the head of the Society's Juvenile Rights Division, the courts in New York were restructured and jurisdiction over children, whether charged with delinquent acts or believed to be in need of protective services, was lodged in the Family Court of the State of New York. At the same time, the legislature, recognizing the need for advocates to appear on behalf of these children, made provision for the appointment of law guardians and The Legal Aid Society established its Juvenile Rights Division. Since then the Juvenile Rights Division has been in the vanguard of the

88-489 O—82——9

development of the due process and other rights of children. The Society has also made innovative and imaginative use of social workers, educational consultants and members of other ancillary disciplines in serving the needs of its young clients.

I am grateful to Senator Specter and the Senate Judiciary Sub-committee on Juvenile Justice for the opportunity to share my views on the most important subject of preventive intervention and its place in the juvenile justice system. I urge the Sub-committee to be extremely skeptical of the many proposals, now very much in vogue, to use an inexact and unreliable methodology to make predictions of future conduct and then to make decisions about a youngster's life based upon those predictions particularly where the decisions result in intrusive governmental action and limitations on a youngster's liberty. Liberty is fundamental to our society and to our system of government. Liberty may be defined as the right to be left alone, to be free from coercive government intervention, absent a judicial determination made under defined legal standards and upon proper proof being offered that conduct has occurred which warrants government intervention.(1)

The government in its role as parens patriae has an obligation to this nation's children. That obligation requires that affirmative steps be taken to aid the youth of this country in achieving their full potential by making educational and other opportunities and services available to all. The state's legitimate and proper interest in the welfare of its children must not and cannot be viewed as providing a rationale for circumscribing the liberty of youngsters by compelling them to undergo prescribed treatment, to partake of prescribed services or to be subject

to restrictive placements. The liberty rights of children are no less vital than those of adults.(2)

I want to make one more general observation before turning to my specific comments regarding the invidiousness of utilizing prediction methodology, whether clinically or statistically derived, as a basis for curtailing liberty. Like most citizens of this country I am alarmed and disturbed by the impact of crime on our society and the dreadful toll it exacts in so many communities. That toll falls most heavily on poor and minority communities whose members are the most frequent victims of criminal activity.(3)

There should be many urgent priorities in this country's crime fighting agenda. Some of these priorities should be directed to specific aspects of the criminal justice and juvenile justice systems including the development of meaningful non-incarcerative sentencing or dispositional alternatives with adequate levels of supportive services, the overhaul of inadequate and overcrowded correctional and detention systems and efforts to enhance the quality and training of those who function within all aspects of those systems. Priority attention must also be directed to basic societal needs--to improving educational, vocational and employment opportunities for all Americans whatever their generation, to ensuring that there is decent, affordable housing in livable communities for all our citizens whatever their socioeconomic level, and to making it possible for all segments of our society to have adequate health care and other essential services necessary for a decent quality of life. I respectfully suggest that intrusive and restrictive intervention in the lives of juveniles based upon grossly inaccurate predictive capabilities should not be amongst these priorities.

The "Science" of Prediction

Both the courts[4] and the clinical studies[5] have recognized that the ability to predict the future behavior of a given individual is not only far from certain, it is not far removed from the laws of chance. While it may not be inappropriate for individuals to make choices and determinations as to their private courses of conduct on this basis, it is highly inappropriate for government to use such an unreliable methodology as a basis for deprivation of liberty whether through some form of coercive intervention or outright curtailment of liberty.

As Professor Monahan has previously written:

> The ability to predict which juveniles will engage in violent crime, either as adolescents or as adults is very poor. The conclusion of Wenk and his colleagues that "there has been no successful attempt to identify, within...offender groups, a subclass whose members have a greater than even chance of engaging in an assaultive act" is as true for juveniles as it is for adults. It holds regardless of how well trained the person making the prediction is--or how well programmed the computer--and how much information on the individual is provided. More money or more resources will not help. Our crystal balls are simply very murky, and no one knows how they can be polished.[6]

All of the studies of merit recognize that predictions of dangerousness, however defined, necessarily entail a high rate of false positives.[7]

> (N)either psychiatrists nor anyone else have reliably demonstrated an ability to predict future violence... neither has any special psychiatric expertise in this area been established.[8]

Extended in-depth longitudinal studies have produced false positives which occur in sixty-five percent of the cases.[9] Even where variables were controlled and indicators utilized to identify population segments that were three times more likely than other groups to commit future violent acts,

the unreliability of the prediction of the likelihood of future criminality remains extraordinarily high[10] and predictions of dangerousness are even more faulty.[11]

> The conclusion to emerge most strikingly from these studies is the great degree to which violence is over predicted. Of those predicted to be dangerous, between 54 and 94% are false positives--people who will not in part be found to have committed a dangerous act. Violence...is vastly over predicted, whether simple behavior indicators or sophisticated multivariate analyses are employed, and whether psychological tests or thorough psychiatric examinations are performed.[12]

While the utilization of statistical data (as opposed to clinically derived data) may reduce false positives to a degree, the likelihood of false positives remains unacceptably high. Moreover, behavior which is not likely to occur with frequency is impossible to predict without a high rate of false positives. Predicting the likelihood of violence with respect to pre-delinquents raises the likelihood of even higher false positives.[13] Indeed, the base rate for criminal conduct of juveniles who have never committed a crime is virtually undeterminable. Thus, the probability of being wrong when predicting criminal behavior is enormous.

It should also be noted that contrary to what Professor Monahan seems to imply "there are simply no reliable indicators of which persons are likely to commit a dangerous act within a specified period of time."[14] Monahan's suggestion appears to be that emergency short term intervention may be viewed less seriously.[15] If this view was based on a validated assertion that predictions about acts that may occur in the near term are likely to produce fewer false positives, it would have some merit. However, the studies do not support such an assertion. Rather, they indicate that as time increases, so does the likelihood that a pre-

diction of dangerous behavior will be somewhat more accurate.(16)

It is apparent that, as with the mental health field, there is a tendency in juvenile justice to over-predict the occurence of future criminal behavior(17) and a concommitant tendency to over-intervene. Given the lack of a reliable prediction methodology, the effects even of non-coercive intervention on those youngsters included within a target population must be examined critically. Social science professionals, psychologists, educators and legal scholars have all been highly critical of labeling and classification.(18) Such practices are frequently viewed as self fulfilling and may often be inherently discriminatory.(19) Certainly proposals which would target intervention toward actuarily derived groups of youngsters would appear to segregate youngsters along racial and class lines.(20)

> No matter what conceptual framework is employed, classifying a person is an arbitrary process. Much controversy exists over the usefulness as well as the ethics of the classification. It has been pointed out that overt or covert ethnocentrism may have a potentially destructive effect on the lives of those who are classified...(21)

Where the approach proposed would involve coercive intervention in the lives of those labeled pre-delinquent, sound policy as well as the liberty interests of the youngsters dictate that such proposals be rejected.

It is easy to salute liberty in the abstract. It may often be difficult to remember that it is not merely an abstract principle but a right of all citizens, including our children. Only insofar as we reject proposals that would undercut that right can we hope to remain a free and democratic society governed by the rule of law. In this time of great passion about crime we must be extremely

careful, for our own safety's sake, not to let our zeal to fight crime lead us to destroy our liberties.

On behalf of The Legal Aid Society of New York City, I want to thank you for the opportunity to express our concerns and reservations about preventive intervention.

FOOTNOTES

(1) Zablocki v Rehail, 434 U.S. 374(1978).

(2) In re Gault, 387 U.S. 1(1967); Kent v U.S., 383 U.S. 541(1969); In re Winship, 397 U.S. 358(1970); Breed v Jones 441 U.S. 520(1979).

(3) Gordon, "Capitalism, Class and Crime in America," Classes, Conflict and Control 159, 161 (Anderson Press, 1976).

(4) Jurak v Texas, 428 U.S. 262(1976); U.S. v Ceccolini 435 U.S. 268(1978); Baldazar v Ill. - U.S. - (1980).

(5) Morris, The Future of Imprisonment 62 (U. of Chicago 1974); Monahan, The Prevention of Violence, Community Health and the Criminal Justice System (Pergamon Press, 1976); Monahan, "The Prediction of Violent Behavior in Juveniles" The Serious Juvenile Offender 148 (U.S. Dept. of Justice, 1978); Monahan, Predicting Violent Behavior: An Assessment of Clinical Techniques (Sage Publications, 1981); Cocozza & Steadman, "Some Refinements in the Measurement and Prediction of Dangerous Behavior," 131 Am. Psychiatry 1012(1974); Cocozza & Steadman, "The Failure of Psychiatric Predictions of Dangerousness: Clear and Convincing Evidence," 29 Rutgers L. Rev. 1084(1976); Kozol, Boucher, Garofalo, "The Diagnosis and Treatment of Dangerousness," 18 Crime and Delinquency 371(1972), Wenk, Robinson & Smith, "Can Violence Be Predicted?," 18 Crime and Delinquency 393(1972); Wolfgang, Figlio & Sellin, Delinquency in a Birth Cohort (U. of Chicago, 1972).

(6) Monahan, "The Prediction of Violent Behavior in Juveniles, "The Serious Juvenile Offender, supra at 154;

(7) Kozol, Boucher, Garofalo. "The Diagnosis and Treatment of Dangerousness," 18 Crime and Delinquency, supra; Wenk, Robinson & Smith, "Can Violence Be Predicted," 18 Crime and Delinquency, supra; Wolfgang, Figlio & Sellin, Delinquency in a Birth Cohort, supra.

(8) American Psychiatric Association, Task Force Report 8: Clinical Aspects of The Violent Individual 28(1974).

(9) Kozol, Boucher, Garofalo, The "Diagnosis and Treatment of Dangerousness," 18 Crime and Delinquency, supra.

(10) Wenk, Robinson & Smith, "Can Violence Be Predicted?," 18 Crime and Delinquency, supra at 399-400.

(11) Monahan, "Prediction of Violent Behavior in Juveniles," The Serious Juvenile Offender, supra at 150.

(12) Id. at 153.

(13) Wolfgang, Figlio & Sellin, Delinquency In a Birth Cohort, supra.

(14) Guggenheim, "Paternalism, Prevention and Punishment: Pretrial Detention of Juveniles," 52 N.Y.U. L. Rev., 1064, 1090(1977).

(15) Monahan, Predicting Violent Behavior: An Assessment of Clinical Techniques, supra at 91.

(16) Wolfgang, Figlio & Sellin, Delinquency In a Birth Cohort, supra at 240-255.

(17) Bazelon, "Institutionalization, Reinstitutionalization and the Adversary Process, "75 Colum. L. Rev. 887(1975); Dershowitz, "Psychiatry in the Legal Process: A Knife That Cuts Both Ways," 4 Trial 29(Feb./March 1969); Ennis & Litwack, "Psychiatry and the Presumption of Expertise: Flipping Coins in the Courtroom," 62 Calif. L. Rev. 693(1974); Livermore, Malquist & Meeke, "On the Justification for Civil Committment," 117 U. of Pa. L. Rev. 75(1968).

(18) Ryan, Blaming the Victim (1971); Dunn, Exceptional Children In The Schools (1973); Kirp, "Schools As Sorters: The Constitutional and Policy Implications of Student Classification," 121 U. of Pa. L. Rev. 705(1973); Comment, "Segregation of Poor and Minority Children Into Classes for The Mentally Retarded By The Use of I.Q. Tests," 71 Mich L. Rev. 1212(1973); Klein, "Labeling Deterence and Recidivism: A Study of Police Dispositions of Juvenile Offenders," 22 Social Problems 292(Dec. 1974).

(19) Rivers, Henderson, Jones, Ladner & Williams, "Mosaic of Labels for Black Children," Issues In The Classification of Children 214(1975); Kirp, "Student Classification, Public Policy and The Courts," 44 Harv. Educ. Rev. 27(Feb. 1974).

(20) Monahan, "The Prediction of Violent Behavior in Juveniles," The Serious Juvenile Offender, supra at 157.

(21) Prugh, Engel & Morse, "Emotional Disturbance in Children," Issues in Classification of Children, supra at 261-262.

Senator SPECTER. Well, I am told in light of the vote on the Senate floor they are going to try to finish up Appropriations before the vote, so it is going to be necessary at this point to adjourn.

Let me thank you all very much for coming. I think we have gotten a lot of learning and a fair amount of wisdom here this morning. This is a subject which this subcommittee is going to pursue. I think it is a very, very important subject and I would be interested in your continuing comments, and we shall be in touch with you and please be in touch with us if you have anything to add on these questions which we have begun to explore this morning.

Thank you very much, and the hearing is adjourned.

[Whereupon, at 12 o'clock p.m., the hearing was adjourned.]

APPENDIX

United States Senate

COMMITTEE ON THE JUDICIARY
WASHINGTON, D.C. 20510

STROM THURMOND, S.C., CHAIRMAN
CHARLES McC. MATHIAS, JR., MD.
PAUL LAXALT, NEV.
ORRIN G. HATCH, UTAH
ROBERT DOLE, KANS.
ALAN K. SIMPSON, WYO.
JOHN P. EAST, N.C.
CHARLES E. GRASSLEY, IOWA
JEREMIAH DENTON, ALA.
ARLEN SPECTER, PA.

JOSEPH R. BIDEN, JR., DEL.
EDWARD M. KENNEDY, MASS.
ROBERT C. BYRD, W. VA.
HOWARD M. METZENBAUM, OHIO
DENNIS DeCONCINI, ARIZ.
PATRICK J. LEAHY, VT.
MAX BAUCUS, MONT.
HOWELL HEFLIN, ALA.

VINTON DEVANE LIDE, CHIEF COUNSEL
QUENTIN CROMMELIN, JR., STAFF DIRECTOR

SUBCOMMITTEE ON JUVENILE JUSTICE
ARLEN SPECTER, PA., CHAIRMAN
JEREMIAH DENTON, ALA.
CHARLES McC. MATHIAS, JR., MD.
HOWARD M. METZENBAUM, OHIO
EDWARD M. KENNEDY, MASS.

BRUCE A. COHEN, CHIEF COUNSEL

September 28, 1981

Mr. Charles A. Lauer
Acting Administrator
Office of Juvenile Justice and
Delinquency Prevention
U.S. Department of Justice
Washington, D.C. 20531

Dear Mr. Lauer:

The Subcommittee on Juvenile Justice of the Senate Committee on the Judiciary will be holding a hearing on Thursday, October 22, 1981 to consider early diagnosis and classification of persons most likely to become violent criminal offenders. The Subcommittee is most interested in learning about the accuracy and utility of various efforts to predict serious and violent crime by juveniles and adults.

It would be appreciated if you would furnish, by October 7, the views of the Office of Juvenile Justice and Delinquency Prevention and the National Institute of Juvenile Justice on this topic for the written record. The Subcommittee wishes to know what role the National Institute of Juvenile Justice has played in supporting research and demonstrations in this area. In particular, the Subcommittee wants to know what has been accomplished by the National Institute of Juvenile Justice in predicting individual violent behavior. In addition, the Subcommittee is interested in your future plans regarding this type of research and in learning what can reasonably be expected to be accomplished if federal support for this type of research is continued at approximately the current level and what could reasonably be expected if the Federal Government were to decline support for this type of research in the future.

Thank you for your attention to this matter.

Sincerely,

Arlen Specter

AS/jec

1. What role has the National Institute for Juvenile Justice and Delinquency Prevention played in supporting research and demonstrations in this area (diagnosis and classification of persons likely to become violent offenders, and prediction of serious and violent crimes by juveniles and adults)?

Section 243(1) of the Juvenile Justice and Delinquency Prevention Act of 1974, as amended, authorizes NIJJDP to "conduct, encourage, and coordinate research and evaluation into any aspect of juvenile delinquency...". Section 243(2) authorizes NIJJDP to "encourage the development of demonstration projects in new, innovative techniques and methods to prevent and treat juvenile delinquency." Section 244(2) authorizes NIJJDP to "develop, conduct, and provide for seminars, workshops, and training programs in the latest proven effective techniques and methods of preventing and treating juvenile delinquency for law enforcement officers, juvenile judges, and other court personnel, probation officers, correctional personnel, and other Federal, State, and local government personnel who are engaged in work relating to juvenile delinquency...".

Section 247(a) requires NIJJDP to assist the National Advisory Committee in the development of standards for the administration of juvenile justice.

Since its establishment in 1975, the NIJJDP has supported a rather broad and comprehensive program of research focused on serious and violent youth crime. Much of this work has addressed the diagnosis, classification, and prediction issues. The bulk of the work in these specific areas has primarily consisted of basic research, assessments of the state-of-the-art, of new State legislation, and program development. In addition, extensive work has been accomplished on data base development at local, State, and national levels; and development of standards for the administration of juvenile justice, many of which are directly relevant to these areas of interest.

Finally, a significant amount of training has been provided to juvenile justice practitioners (especially judges and other court-related personnel) around diagnostic and classification procedures and criteria as applied to juvenile offenders.

The specific projects related to the above three areas are described below together with brief summaries of their results particularly germane to the subject areas. Discussion of the results of prediction studies is contained in our response to the second question.

National Assessment of Case Disposition and Classification.

In 1978, NIJJDP sponsored a nationwide assessment of case disposition and classification in the juvenile justice system. Conducted by the NIJJDP's National Juvenile Justice System Assessment Center, this study consisted of two parts: 1) a comprehensive search of the literature which summarized prior research on the case decision-making process, and 2) a juvenile justice system-wide Case Decision Survey made in seven jurisdictions to help determine how juveniles are classified, and to identify some of the possible controlling factors that could affect the disposition choice in processing juvenile cases.

Significant findings from this research (of interest here) follow.

Officials in every juvenile justice system component have broad discretionary authority in deciding what label is assigned to juvenile cases and what processing dispositions will be followed in handling juvenile referrals. Adequate guidance in the form of written local policy guidelines was not generally found to be available to officials at almost any level of the system when considering classification and disposition decisions. What policy does exist does not appear to significantly influence the decisions officials make.

The marked absence of written policies coupled with other research findings increase the likelihood that inconsistent labeling does occur in the juvenile justice system. The regularity with which it occurs and subsequent impact on juveniles is, however, unknown.

At every level of the juvenile justice system, "accepted" or informal agency practices and customs appear to be significant determinants in labeling and disposition decisions. Little research has been directed, however, at determining what specific policies or practices exist in agencies or how they may impact case processing decisions.

Prosecutors are receiving an increasing amount of discretionary authority and the

decisions they make significantly affect the way the system handles juveniles. Many jurisdictions have given prosecutors ultimate responsibility for deciding if and when a juvenile will be processed through juvenile court. Written policy, however, is virtually nonexistent. Few studies have examined the problems that occur at this critical point in the system.

Virtually no studies have examined the staffing patterns, workload, informal agency practices, and decision criteria used by prosecutors. This assessment disclosed that the least experienced usually perform these functions and that the personnel are constantly rotated. District attorneys also do not make available the same level of resources to juvenile court staff, especially with respect to case investigation services, that are usually made available to other agency functions.

At the court level, the assessment found that very little research has been done towards examining the effect local judicial practices, policies, or orientation has on case processing decisions. The research that has been done is inconclusive in its findings about the role these factors have in processing juveniles through the system.

The referral incident is the single most important factor officials stress when choosing a classification and disposition of a juvenile case at any level of the system.

In effect, at every level of the system, there was a definite relationship between how serious an official perceived the offense and the classification decision that resulted.

At any point in the juvenile justice system enormous amounts of information are collected about the referral incident, the juvenile, and his family background and socio-economic characteristics. Overall, officials appear to consider only about half of the information that is generally available before making a classification and disposition decision.

Across the system it was found that information about the a) juvenile's statement, b) prior police contacts, and c) juvenile's attitude and demeanor are used more extensively by officials when choosing a classification and case disposition than any other information available.

Virtually no research has studied the adequacy of evidence in a case. One study did indicate that, even with adequate evidence, police may not process the case through juvenile court. The Case Decision Survey did indicate that prosecutors do give serious consideration to the quality of the evidence when deciding whether to file a court petition.

The literature review did not identify any research that conclusively indicated how often and under what circumstances reclassification of juvenile cases occured. However, the survey revealed that little reclassification occurs at any level of the system.

In addition to these general findings, the assessment also identified a number of areas in the juvenile justice system which would benefit from training, program development, and research. Many of these have been incorporated into OJJDP activities and plans, to which some reference shall be made shortly herein.

Data Base Development and Analysis.

NIJJDP has made a contribution to data base development and analysis pertinent to the violent offender research area--at National, State, and local levels. Four projects are especially relevant. Brief descriptions of these follow.

Since 1975, NIJJDP has provided support to the National Council of Juvenile and Family Court Judges for the National Uniform Juvenile Justice Reporting System (NUJJRS)--formerly called the juvenile court reporting system. In existence since the 1930's, the system has recently been improved and expanded. It now provides reliable nationwide data on juvenile justice system handling of juveniles resulting in, for example, trend data regarding classification and dispositions. Special analyses of handling of all offenders, and such particular categories as violent offenders, are now possible--at National, State, and local levels.

NIJJDP has also sponsored development of a local automated juvenile court information system: Juvenile Information System Records Analysis (JISRA), in conjunction with the National Council of Juvenile and Family Court Judges. This system provides complete information on court processing of juveniles for both management and research purposes.

Such information is helpful in diagnostic, classification, and predictive decision-making. JISRA has been installed in Rhode Island (statewide) and has been transferred to other jurisdictions, including the District of Columbia Superior Court.

NIJJDP has sponsored special analyses of the National Victimization Survey data in the juvenile area. Offenses perpetrated by juveniles covered in the survey are primarily violent (rape, robbery, assault) and also include personal larceny. Issues addressed include changes in the rate of victimization by juveniles in the nature and seriousness of crimes by juvenile offenders and in offender characteristics. Results from this work help refine the factors and circumstances predictive of violence and ultimately will help inform classification decision-making.

The last of these four data-base development projects is the National Survey of Self-Reported Delinquency and Drug Use. Involving repeated surveys of a national probability sample of juveniles, results from this study provide benefits similar to those of the national victimization work. Both of these projects, as well as the NUJJRS system, make an important contribution to national trend monitoring and prediction in the violence area.

Replication of the Philadelphia Birth Cohort Study. Whereas the original study involved an examination of delinquency among 10,000 boys born in 1945, the replication study population includes approximately 30,000 girls and boys born in 1958 who attended school in Philadelphia between the ages of 10 and 17. The study is designed to investigate such areas as overall cohort delinquency rates, demographic and school correlates of delinquency, first and subsequent offense probabilities, patterns of delinquent careers, the effects of various sanctions on the probabilities of subsequent offenses, and advantageous intervention points. The results of the replication study will also be compared to the original birth cohort study to examine changes in delinquent patterns over time.

Reassessing the Relationship of Adult Criminal Careers to Juvenile Careers. The second major study of delinquency careers sponsored by NIJJDP consists of research on three birth cohorts (1942, 1949 and 1955) of 4,079 boys and girls who had continuous residence in Racine, Wisconsin. The study was designed to provide information on the relationship of

juvenile delinquent careers to adult criminal careers; to determine which of various alternative decisions by the justice system or the juveniles have helped to continue or discontinue delinquency careers; and to suggest at what time in juvenile careers intervention can be most effective.

High Risk Early School Behavior Predictive of Later Delinquency. This project consists of a longitudinal study of a random sample of 661 children who entered kindergarten in Philadelphia in 1968, conducted by Dr. George Spivack, Hahneman Medical College. The major purpose of the study is to identify early behavioral problems that indicate that a child is especially high risk for subsequent socially troublesome behavior in the general school environment, in the classroom, and in the community. Information is being developed on patterns of behavior, school achievement, and school responses, which are predictive of academic failure, emotional disturbance and delinquency through grade twelve.

Problems of Secure Care. NIJJDP supports a research project in Massachusetts conducted by Harvard Law School's Center for Criminal Justice pertaining to secure care of juvenile offenders. The research examines both the determinants and effects of correctional reform and is attempting to define the essential features of an effective secure care program in a largely community-based correctional system. Preliminary results follow.

In terms of diagnostic and classification needs, the research supports the use of offense background, an important criterion for classification/disposition decisions in some cases. It suggests that it is preferable to base such decisions not solely or primarily on the

offense background, but rather on actual staff knowledge regarding what it takes to control particular youths. The research also suggests the use of continuous case management as the vehicle for the review of diagnostic and program placement decisions and for caseload supervision and control.

In terms of diagnostic and classification needs, the research supports the use of offense background, an important criterion for classification/disposition decisions in some cases.

88-489 O—82——10

It suggests that it is preferable to base such decisions not solely or primarily on the offense background, but rather on actual staff knowledge regarding what it takes to control particular youths. The research also suggests the use of continuous case management as the vehicle for the review of diagnostic and program placement decisions and for caseload supervision and control.

A Comprehensive Study of the Effectiveness of Correctional Programs for Serious and Non-Serious Juvenile Offenders. Directed by Professor Jackson Toby, Rutgers College, this project consists of a longitudinal study of nearly all juveniles who entered the New Jersey State Correctional System between October, 1977 and July, 1978. It was designed to assess the effects of mixing dangerous and less serious offenders in a variety of correctional programs, and an examination of the conditions under which incarceration of violent offenders leads to increasingly violent post-institutional behavior. Preliminary results follow.

Offenders incarcerated in units containing a high proportion of previously incarcerated youngsters are more likely to be arrested for a violent crime within six months of release from the institution than offenders incarcerated in units with a low proportion of previously incarcerated youngsters.

Offenders incarcerated in units with a high proportion of violent youngsters are no more likely to be arrested for a violent crime within six months of release than offenders incarcerated with a low proportion of violent youngsters.

Offenders incarcerated in correctional units with a high level of participation in community activities (e.g., work, church attendance, movies, recreation) are less likely than offenders incarcerated in units with a low level of participation in community activities to be arrested for violent crimes with in six months of release.

Offender Careers and Restraint: Probabilities and Policy Implications. In 1976, NIJJDP funded follow-up research to the original Philadelphia birth cohort study. This project consisted of a study of a sample of the earlier research group about 15 years later.

Specifically, the major objectives of the project were 1) to examine the relationship between juvenile and adult criminal careers, 2) to determine the amount and types of offenses attributable to chronic offenders, and 3) to assess the crime reduction effect of restraint by incarceration. The study is based on a 10 percent sample (975) of the original cohort of 10,000 males from the earlier study. Data on demographic characteristics, official and self-reported offense histories, dispositions, and sanctions through age 30 were analyzed.

Assessment of the Implementation and Impact of Juvenile Law Reform in Washington State. The Institute of Policy Analysis was awarded a grant to study the implementation and impact of Washington State's new juvenile justice legislation (House Bill 371, as amended). These legislative provisions reflect the most dramatic and broad-sweeping legislative changes in the administration of juvenile justice in the country. The assessment, which is equally comprehensive, directed by Dr. Anne L. Schneider, addresses the following major objectives of the new law: formalizing the system of juvenile justice and ensuring due process for offenders; diverting less serious offenders; establishing uniform sentences for juvenile offenders; removing status offenders from the jurisdiction of the juvenile court, and establishing an alternative service delivery system for non-offenders. Preliminary results follow.

One of the most significant provisions related to the classification, diagnosis and treatment of serious, violent juvenile crime is the development of presumptive sentencing standards. The standards are designed to insure that sentence (dispositions) are proportional to the seriousness of the juvenile's instant offense and past delinquent history, and determinate in nature.

An indepth study of legislative history and philosophy revealed that the intent of the sentencing standards was to promote fairness and equity in application of sanctions for criminal behavior of juveniles, and to make juveniles accountable for their criminal offenses rather than to serve as a mechanism of predicting future criminal behavior.

One of the major unintended consequences of the legislation, reported by juvenile justice

system prosecutors, was the increased use of plea bargaining in processing of juvenile cases. As expected, when discretion is significantly curtailed, the standards were most frequently criticized for their rigidity, and complexity as well as leniency with regard to repeat or chronic offenders. However, the survey indicated that while "manifest injustice" (a provision which allows judges to sentence outside the standard range) was infrequently invoked, it usually resulted in an increase in the severity of the sanction imposed, often resulting in the commitment of "uncommittable" youth.

While this effort does not have direct implications for the prediction of future violent criminal behavior, it promises to provide valuable information on a well-conceived and balanced approach towards dealing appropriately with the chronic, serious and violent offender, as well as the less serious offender through the adoption of sentencing guidelines.

Training.Over the last several years the National Council of Juvenile and Family Court Judges has conducted a broad range of training courses for judges, key court-related personnel, court administrators, probation officers and others. Of the 3,025 individuals trained, over 2,000 have attended courses which have had specific diagnosis and classification components. These components have been based on "state-of-the-art" information derived from NIJJDP, NIJ and NIMH research. Some specific areas covered in addition to the serious and violent delinquent, have been mental retardation, children with special problems, drug abuse, alcohol abuse, treatment in training schools, commitment and release decision-making, the impact of nutrition on behavior and dysfunctioning families.

Of particular importance is the textbook developed by NCJFCJ entitled "Dispositional Alternatives in Juvenile Justice: A Goal Approach." This textbook provides a classification system with recommended dispositions.

Standards. Three major sets of comprehensive standards for the administration of juvenile justice have been developed by nationally prominent organizations and professional groups over the last decade. All have recommended specific decision-making criteria relating to

intake, detention, waiver, and dispositional decisions which take into account the seriousness of the offense, the juvenile's role in that offense, and the juvenile's prior record.

Consistently, all of the standards groups recommend the adoption, implementation, and monitoring of written policies within each juvenile justice agency which structure the discretion of decision-makers in processing juvenile cases.

With the exception of standards which allow preventive detention, basically all other recommended responses particularly to serious and violent offenses, are in response to past behavior rather than predictive of future behavior. Application of standards governing the court's jurisdiction over delinquency and non-criminal misbehavior and the provisions for waiver of the chronically serious and sophisticated juvenile offender will encourage juvenile courts and correctional agencies to concentrate their resources on serious and violent juvenile offenders. Various standards also provide the classification tools to enable jurisdictions to focus their efforts on serious juvenile crime by weeding out those non-serious and non-criminal cases as well as those who have demonstrated by their offenses and past delinquent history that they are not appropriate for juvenile justice programs and treatment.

Without clearly written policies and guidelines designed to achieve these objectives, decisions will continue to be made that neither protect the public from violent juvenile crime nor protect the juvenile from inconsistent handling in the juvenile justice system or the indiscriminate transfer to the adult system.

Specific standards recommended by the National Advisory Committee for Juvenile Justice and Delinquency Prevention (NAC) related to the classification and diagnosis of juveniles charged with serious/violent crime are attached.

NAC Standard 3.116, "Transfer to Another Court-- Delinquency " (attached) describes the conditions, procedures and criteria that should be followed in waiving a juvenile to criminal court. It takes into account the age of the juvenile, the nature of the alleged

offense, the juvenile's delinquent history and the inefficacy of each of the dispositions available to the juvenile/family court. Diagnosis of a juvenile's amenability to treatment is one factor to be considered in making the waiver decision..

Standards regarding the use of secure detention are intended to limit the use of detention to the most serious and violent juveniles. Similarly, the standards recommend that dispositions resulting in secure confinement provide for classification of offenders based on the seriousness of the juvenile's offense, in determining the appropriate sanction. Subsequent to placement in a correctional facility, diagnostic testing is required for the development and implementation of an individual program plan to meet the needs of the juvenile while in confinement.

2. What has been accomplished by the National Institute for Juvenile Justice and Delinquency Prevention in predicting individual violent behavior?

As a first step toward developing a better understanding of the serious and violent juvenile crime problem, OJJDP sponsored a National symposium on the subject in 1977. Prediction of serious and violent juvenile crime was one of the major issues of discussion. Dr. John Monahan was asked to prepare an analysis of the state-of-the-art of predicting individual future violence. He concluded that although the best predictor of future violence by juveniles seems to be their past behavior, our ability to predict which juveniles will engage in violent crime, either as adolescents or adults, is still very poor. However, we have begun to identify characteristics which influence the probability that a juvenile will commit a violent act.

Also reported to the symposium was one of the key studies which has identified some of the characteristics predictive of violence. This was an NIJJDP-sponsored follow-up study of a 10 percent random sample of the original 1945 Philadelphia birth cohort, by Dr. Marvin Wolfgang. He reported that the probability that an offender will recidivate after committing a fourth or fifth offense is very high (about .80). His results also suggested that age, sex, race and socio-economic status affect the probability of a juvenile

committing a violent crime. One component of this study consisted of an effort by Dr. James Collins to predict how much crime would be prevented by incarcerating convicted offenders. The results indicated that the deterrence-restraint potential of incarceration is greatest for chronic offenders (five or more offenses) and for young adults, age 19 to 22.

Finally, in another of the symposium papers, Dr. Franklin Zimring identified several of the major questions which remain to be answered. These include: identification of the social age and criminal justice settings that predict multiple episodes of serious criminality, and the duration and intensity of careers in violent crime among different types of offenders. Following the 1977 symposium, NIJJDP initiated several studies designed to contribute to improving our ability to predict serious and violent delinquency. The first of these was the replication of the 1945 Birth Cohort study in Philadelphia by Dr. Marvin Wolfgang.

The preliminary results of this study support earlier studies revealing that the best prediction of violence is past violence. For males the probability of committing at least one more violent offense after five offenses is slightly greater than 55 percent. Females also showed a high probability of a fourth or fifth offense. Thus, while past behavior may be the best predictor, the study suggests that using this factor alone would result in high rates of false predictions. Also, the preliminary findings suggest that the probability that a juvenile will commit a violent offense also differs by race and sex. The probability for a non-white male is three times higher than the chances for a white male. The probabilities for females are lower but maintain the same racial differences.

A second major career study sponsored by NIJJDP designed to investigate the potential to predict adult criminal careers from juvenile careers was conducted by Dr. Lyle Shannon, University of Iowa. This study also showed that the probability of continuing contacts for males after the fourth contact was at least 80 percent. A series of prediction analyses indicated that for the sample who had no police contacts prior to age 18, only 5% had five or more contacts after 18, while 65% of those who had five or more contacts before age 18 had five or more after 18. Shannon concluded that although there is a relationship between frequent and more serious contacts in early years and continuity of careers, this

information alone does not improve our predictive efficiency significantly. The result would be both too many false positive and false negative predictions.

The third major study (ongoing) in this area broadened NIJJDP's approach to the area of prediction. Dr. George Spivack is attempting to identify early non-delinquent behavior patterns and societal responses which are predictive of later high risk of involvement in delinquency. The preliminary results indicate that there is a high risk behavior pattern for later police contacts which can be identified as early as kindergarten. The pattern involves psychological characteristics of the child interacting with the stress of initial school attendance, and subsequent specific types of responses by school officials. The value of this approach to prediction lies in the potential to develop preventive interventions which address these early behavioral signs of high risk for later involvement in delinquency.

A next step in NIJJDP's approach to the area of prediction was to commission, in 1981, an update of the state-of-the-art of prediction to serve as a basis for designing new research. Dr. Joseph Weiss and John Sederstrom assessed the most recent findings related to prediction of serious juvenile crime.

The assessment revealed that developments in the area of prediction based on the presence of known or presumed causes of delinquency are still insufficient to add significantly to the efficiency of predicting future behavior from past behavior. This is due, in part, to inadequate indentification and measurement of the causes or predictors of delinquency. However, studies have continued to show that prediction based on past behavior results in a 50% to 75% rate of false positive predictions. Thus, the result of decisions based on such information is likely to be considerable public expense for unnecessary interventions, as well as substantial costs to the recipient of the intervention. Dr. Weiss concludes that more rigorous research is needed to establish the causes of delinquency and thus, improve our ability to predict delinquent behavior of all types.

3. What future plans has the National Institute for Juvenile Justice and Delinquency Prevention made regarding this type of research?

NIJJDP plans to continue and expand its program of research on serious and violent juvenile crime during Fiscal Year 1982. The areas tentatively identified include research on 1) the chronic offender, 2) juvenile and criminal justice system responses to the chronic or violent offender, 3) programs designed to ensure swift and certain prosecution and punishment of these offenders, and 4) improvement of violence prediction capabilities.

New research is planned in these areas in addition to continuation of some current efforts. Anticipated continuation activities in the above four areas are likely to include replication of the landmark Philadelphia birth cohort study being conducted by Professor Wolfgang and his colleagues at the University of Pennsylvania; follow-up research to Professor Shannon's Wisconsin study of the relationship of adult criminal careers to juvenile criminal careers; the Violent Offender Research and Development Program; the chronic aspect of gang and law-violating group behavior; and, the Massachusetts study of secure-care of serious and violent offenders by Professor Lloyd Ohlin and Dr. Alden Miller at Harvard University.

Each of the studies makes a direct contribution to new knowledge in one or more of the three areas of concern here.

We also anticipate continued activity in data base development and analyses. These efforts might include updated analyses of the National Victimization Survey data; continuation of the National Survey of Self-Reported Delinquency; the National Uniform Juvenile Justice Reporting System; and, local data base development.

As noted earlier, these efforts make direct contributions to predictions of serious and violent crimes both at the individual and aggregrate levels.

Several new research efforts are under consideration which might include an additional cohort/offender career study; more in-depth research on the causes of chronic involvement in serious and violent juvenile crime, and the transition from juvenile to adult criminality; a research and development project on gange violence; a comparative dispositions study; research on the effects of legal, organizational, and philosophical factors on processing decisions and outcome; and a prospective violence prediction study.

Again, each of these studies would make a direct contribution to new knowledge in one or more of the diagnostic, classification, and prediction areas.

4. What can reasonably be expected to be accomplished if federal support for this type of research is continued at approximately the current level and what could reasonably be expected if the Federal Government were to decline support for this type of research in the future?

Most, but not all, of the efforts described will continue at reduced levels if appropriations are available. With no funds, these efforts would end. It should be noted that the Attorney General's Task Force on Violent Crime, Final Report, August 17, 1981, stated that adequate resources should be available for the research, development, demonstration, and independent evaluation of methods to prevent and reduce serious crime; for disseminating these findings to federal, state, and local justice agencies; and for implementing these programs of proven effectiveness at the state and local level.

STATEMENT OF SALEEM A. SHAH, Ph.D., CENTER FOR STUDIES OF CRIME AND DELINQUENCY, NATIONAL INSTITUTE OF MENTAL HEALTH

I am honored to have this opportunity to respond to the request of the Subcommittee for a written statement of views with respect to the accuracy and utility of efforts to predict serious and violent crime by juveniles and adults. In addition, I was asked to provide information on the role which the NIMH Center for Studies of Crime and Delinquency has played in supporting research in this area and on the types of research that might be supported in future.

The Center for Studies of Crime and Delinquency is the focal point in the National Institute of Mental Health for research on antisocial behavior, individual violent behavior, and related law and mental health interactions. The objectives of the Center's program are to support research and training endeavors that can improve the ability to understand, cope with, treat, and prevent problems of mental health involved in the above behaviors. The scope of the Center's program encompasses biological, behavioral, psychosocial, and empirical legal studies.

A major activity of the Center since its inception in 1968 has been the support of research on individual violent behavior. Studies of this type have been of consistently high program priority because of the frequency with which problems of mental health tend to be involved. For example, over the past 12 years the Center has sponsored research which has explored: (1) the putative role of the 47,XYY chromosome abnormality in the genesis of individual violent behavior; (2) the episodic dyscontrol syndrome and individual violent behavior; (3) studies of childhood aggression; (4) ways to reduce violent interactions between police officers and citizens -- e.g., in police responses to family crises and quarrels; (5) the frequency, nature, and mental health consequences of violence within the family; (6) adequacy of hospital and other health agency responses to physical and mental health needs of battered women and assault victims; (7) the dangerousness of

mentally ill persons discharged from public mental hospitals as compared to that of released prisoners and the general populations; and (8) effects of homicides on the mental health of surviving next of kin.

Another feature of the Center's program has been the development of a monograph series for the purpose of insuring that important research findings on mental health aspects of antisocial and violent behavior are made readily available to policymakers, program administrators, and professionals in the areas of concern and to the general public. Some recent and forthcoming titles in the series reflect the scope of the Center effort: Criminal Commitments and Dangerous Mental Patients (1977), Police, Prisons, and the Problem of Violence (1977), Dangerous Behavior: A Problem in Law and Mental Health (1979), Clinical Prediction of Violent Behavior (1981), Clinical Treatment and Management of the Violent Person (forthcoming), and The Adult Mentally Disordered Offender and the Criminal Justice System (in preparation).

As indicated by one of the aforementioned monograph titles, the Center has given particular attention to issues related to the prediction of violent behaviors. Several research projects have been supported in this area and more have been planned. In addition, I have personally had a longstanding interest in the topic of violent and dangerous behaviors and have written on several aspects of this topic (Shah, 1977, 1978a, 1978b, 1981).

Some Conceptual Issues. Concerns about the alleged or possible dangerousness of an individual are raised at several stages in the criminal justice and mental health systems -- e.g., involuntary commitment of the mentally ill, adjudication and commitment of sexual psychopaths, confinement and release of persons acquitted by reason of insanity, and of course, at numerous points in the criminal process (Shah, 1981).

A major consideration in efforts to predict behavior (be it violent or some other form) pertains to the manner in which behavior is viewed and conceptualized.

Behavior -- whether defined as violent, dangerous, antisocial, friendly, or prosocial -- is often viewed as stemming largely if not entirely from within the person and as being a fairly stable and consistent characteristic of the person (i.e., as a personality trait). In contrast, a situation-focused view of behavior places much emphasis on external stimuli and variables in the physical and social environment as the basic determinants of the person's behavior. A weakness of the latter approach, however, is that it tends to ignore, or at least underemphasize, person-related consistencies in behavior.

Much theoretical and empirical work has been done in recent years with respect to an interactional conceptualization of behavior. This approach emphasizes the importance of understanding the ways in which persons interact with various aspects of their physical and social environments as well with specific interpersonal situations. The view is that behavior almost always involves a continuous interaction between individuals and various situations they encounter. Or, as Endler and Magnusson (1976) have noted:

> Not only is the individual's behavior influenced by significant features of the situations he or she encounters, but the person also selects the situations in which he or she performs, and subsequently affects the character of these situations (p. 958).

During the past two decades, the interactionist perspective has gained many followers in the field of personality and social psychology. One of the more notable attempts to apply this model to the understanding and prediction of individual violent behavior was that of Grant and Toch (Toch, 1969) in a study funded by NIMH. This study involved 128 men (police officers, men who had assaulted police officers, prison inmates, and parolees) who had shown patterns of repeated violent encounters. Attention was focused on the chain of interactions between aggressors and victims and on sequential developments in encounters as the violence unfolded. The study of the violence-prone men showed that some individuals have

rather persistent interpersonal orientations and styles which enable them to perceive, construct, and respond to a variety of interpersonal situations in a manner that produces high probabilities of violent interactions. These individuals respond aggressively to certain interpersonal cues or stimuli which arouse no such response from other individuals. In a very real sense, therefore, such "violence-prone" individuals manage to create their own situations with relatively minimal external cues or provocation.

On the other hand, as Grant and Toch were to show in a later study also funded by NIMH (Toch, Grant, and Galvin, 1975), violence-prone men can be incorporated into problem-solving groups in which they succeed in helping both themselves and others to alter interpersonal styles in ways that can help to reduce the likelihood of violent interactions.

The foregoing discussion thus points up the way in which the implicit or explicit conceptualizations of behavior (including violent behavior) are likely to affect the manner in which tasks of assessment, prediction, and the treatment and handling of violent behavior are approached. Traditional practice tends to focus attention primarily on the individual's personality and behavioral traits, especially aspects of past behavior. Relatively little attention is given to particular setting and situational factors, and on patterns of interpersonal interactions which may differentially affect the likelihood of certain behaviors of concern. The more recent scientific literature, however, stresses the need for greater attention to particular setting and situational conditions which have in the past and are likely in the future to elicit, provoke, and maintain violent and criminal behavior. The same literature also points up the importance of attention to supportive, stressful, and other relevant factors that affect a person's adjustment and functioning in the community. Studies have shown, for example, that accurate predictions of post-hospital adjustment of mental patients in the community have hinged on knowledge of

the environments in which ex-patients will be living, the availability of jobs, family and related supported systems -- rather than on any measured characteristic of the ex-patient's personality or his in-hospital behavior (Fairweather, 1967; Fairweather et al., 1974).

Some Issues Pertaining to Predictions of Dangerousness. The term dangerousness, as used here, refers to a propensity, i.e., an increased probability as compared to others, to engage in dangerous behavior. Dangerous behaviors refer to acts that are characterized by the application or overt threat of force and are likely to result in injury to other persons. Thus, as used here, dangerous behaviors are considered to be synonymous with violent behaviors.

An individual's dangerousness is considered at several decision points in the criminal justice and mental health systems. Indeed, with respect to the mental health system, there has been a remarkable increase in past few years in the number of jurisdictions that have begun to use the criterion of dangerousness (and/or the closely related notion of "likelihood of serious harm") for purposes of involuntary commitment and release of the mentally ill. A survey of civil commitment statutes published seven years ago in the Harvard Law Review (Note, 1974) indicated that only four states' laws were explicitly phrased in terms of "dangerousness" as a commitment criterion, while ten laws used the criterion of "likelihood of serious harm." A survey completed in September 1977 (Schwitzgebel, 1978) found that fully 20 state commitment statutes had incorporated the "dangerousness" criterion, either alone or in conjunction with other criteria, and that the phrase "likelihood of serious harm" was being used in 28 statutes.

Bearing in mind that the term dangerousness is defined here as referring to a propensity (i.e., an increased probability as compared to others) to engage in dangerous or violent behavior, an important conclusion may be drawn with respect to efforts at prediction of dangerousness. The words emphasized above indicate

that what is to be predicted is the probability that certain persons will engage in violent behaviors. Such predictions cannot be made in dichotomous (dangerous/not dangerous) fashion; rather they can only be stated in terms of anticipated probabilities.

Given the admittedly somewhat vague nature of the term "dangerousness," it has often been suggested that what should be predicted is the specific dangerous behavior and not some mere propensity for such behaviors. Such a view is common and understandable. However, there is much evidence that for a variety of reasons, and especially when dealing with behaviors that have very low frequency of occurrence (i.e., low base rates), mental health professionals and others display poor predictive accuracy and tend markedly to overpredict dangerousness. This has been shown in a landmark NIMH study and in other studies as well (Steadman and Cocozza, 1974; Cocozza and Steadman, 1974, 1976; Monahan, 1975).

As indicated above, dichotomous predictions for behaviors which typically have a low base rate pose a number of problems. Such predictions do not reflect the considerable range of variability and probability that are actually involved. Moreover, such predictions cannot readily take into account the crucially important situational factors commonly involved in determining whether or not a criminal or violent act will actually occur. A variety of factors, such as those pertaining to setting, availability of weapons, targets of opportunity, and interpersonal stimuli, will typically be involved.

Predictions should thus refer to the probability that certain individuals with particular characteristics (as reflected mainly in past behavioral patterns), and functioning in particular social settings, may engage in certain types of behaviors (e.g., serious criminal acts) over a given period of time such as 12 or 24 months. Given the many problems associated with the clinical predictions typically provided to courts and other related agencies (Monahan, 1978b; Shah, 1978a,b; Steadman and Cocozza, 1978b) and in order that the probabilities may be determined reliably

and precisely, I believe that greater reliance should be placed on the use of actuarial and statistical approaches in predicting dangerousness. The use of such statistical approaches (e.g., base expectancy tables and other related devices) combined with more systematically derived and periodically tested clinical indicators, would help to reduce the problems inherent in relying on the vague clinical judgments, hunches, and intuitions of mental health professionals and other decision-makers.

Can Dangerousness Really Be Predicted? Given the considerable literature that has developed on the topic, many persons may well be inclined to respond to the above question with a flat No! There seems to be a common wisdom abroad that dangerousness simply cannot be predicted with any acceptable degree of accuracy, and several empirical studies can be cited in support of such a view (e.g., Wenk et al., 1972; Steadman and Cocozza, 1974, 1978b; Cocozza and Steadman, 1976).

It should be noted, however, that the question posed in the heading of this section is couched in very general and indeed global fashion. No mention is made of particular groups or subgroups for whom future dangerousness is to be predicted, nor is there any indication of the prediction methods to be used (clinical or actuarial), or of the level of accuracy desired or expected for purposes of particular decisions. Suppose, for example, the question had been: Can generosity be predicted? Can friendliness be predicted? Can trustworthiness be predicted? Or, to turn the issue around completely: Can public safety be predicted?

The point is simply that very general questions of this kind cannot be answered satisfactorily by a flat yes or no. To say that it is very difficult to achieve high levels of accuracy in predicting violent behaviors which have very low base rates is not the same as asserting that the task is simply impossible. As Monahan (1978a) recently noted, "...a careful reading of the prediction research to date does not support the unqualified conclusion that the accurate prediction of violence is impossible under all circumstances or that psychiatrists, psychologists, and

88-489 O—82——11

others will invariably overpredict its occurrence by several orders of magnitude" (p. 198).

Events that have low base rates are indeed very difficult to predict with high levels of accuracy. Moreover, even the accuracy that is achieved comes at the cost of high rates of "false positives," that is, persons who are predicted to be dangerous but who will not actually display such behavior. The relevant literature on this point goes back more than 25 years.

It must be noted, however, that for most purposes of the mental health and criminal justice systems, the level of reliability and accuracy that is needed in predictions of dangerousness is not absolute. The levels of predictive accuracy required will vary with the nature and importance of the decisions to be made. Likewise, the specific decision situations will involve differing sets of competing objectives and trade-offs; thus, differing rates of "error" will be acceptable as long as certain other objectives can be met. For example, different rates of "false positive" errors may be accepted depending on whether we are dealing with discretionary release decisions (e.g., probation or parole) for a convicted offender with several previous convictions for crimes of violence, with protecting the president from certain would-be assassins, or with a probation-versus-incarceration sentencing decision involving a check passer. In short, the fundamental public-policy decision will not hinge simply or only on the empirical or technical state of the predictive information. The basic issue is the degree of reliability and accuracy that should be expected before a variety of important legal, social, and public-policy decisions can properly be made.

Predictions Involving Recidivistic Offenders. In situations related to events with very low base rates (e.g., frequency of occurrence) there are typically rather

high rates of "false positive" errors. But when dealing with a group that has much higher base rates for dangerous behaviors (e.g., offenders with several arrests and convictions for serious misdemeanors and felonies), the predictive task is relatively easier. Nevertheless, since one is still predicting "dangerousness" (i.e., the probability of engaging in further serious and violent crimes), higher levels of accuracy, but not absolute accuracy, will be obtained. Much recent research evidence points to certain groups of delinquents and criminals who have high rates of committing serious and violent offenses.

Wolfgang et al. (1972), for example, in a NIMH birth cohort study involving almost 10,000 boys born in Philadelphia, found that about one-third (3475) of the boys had had at least one officially recorded police contact; but almost half of these youngsters showed no further police contacts. A very small proportion of the total cohort (6 percent), however, and a small proportion of those who had a single police contact (18 percent), had been charged with five or more offenses. This group of 627 chronic offenders accounted for fully 71 percent of all the homicides committed by the cohort, 77 percent of the rapes, 70 percent of the robberies, and 69 percent of the aggravated assaults.

In a further study which has received support from both NIMH and the Department of Justice, Wolfgang and associates have followed a 10-percent random sample of the original cohort since 1968. Official and self-reported offenses through age 26, and arrests and dispositions to age 30, have been analyzed (Wolfgang, 1977). The followup shows that while 18 percent of all the offenders in the cohort were chronic offenders (with five or more crimes) by age 18, by age 30 fully 31.4 percent were chronic offenders. Using the birth cohort data up to age 30, Wolfgang found that, after the fourth offense, the probability that the offender will recidivate was about 0.80, and the likelihood that the next offense would be an index crime averaged 0.426 (ranging from 0.300 to 0.722).

Similarly, a study in New York City (Shinnar and Shinnar, 1975) found that while only two percent of all persons arrested had been previously arrested for homicide, 40 percent of all those arrested for homicide had previous arrests for a violent crime and 30.5 percent for felonious assaults.

The Rand Corporation has conducted a series of studies of career criminals. One of these (Petersilia et al., 1977; Petersilia, 1978) involved 49 felons in a medium-security prison who had at least one conviction of armed robbery, and who had served at least one previous prison term. In contrast to research that uses official police statistics or relies on victimization surveys, the data in this study were derived from detailed personal interviews with the felons and from checks of official criminal justice records. Obviously, given the selected nature of this sample, no broad generalizations can be made, but some interesting and potentially useful information was obtained by these investigators.

The 49 offenders reported a total of 10,500 crimes, or an average of 214 per offender. In a criminal career averaging about 20 years (with about half the time spent in prison), each offender committed an average of about 20 major felonies per year (about 4 violent and 16 property crimes). When the self-reported crimes were compared with the official data, only 12 percent of the reported crimes were found to have resulted in a recorded arrest. (These and similar findings have obvious implications with respect to relying only on officially recorded arrests, let alone criminal convictions, for accurate estimations of the nature and extent of an individual's actual criminal behavior.)

Petersilia (1978) reports that criminal careers typically had begun as early as age 14, had tended to peak in the early twenties, and then begun to decline around and after age 30. For instance, in the age group of 14 to 21 years, the offense rates averaged between 20 to 40 crimes per year; for those 22 to 25 years old, the rate was about 12 crimes per year; and by the time the offenders were 26 to 30 years old, the number of offenses had dropped to 7 per year.

In addition, two broad categories of offenders emerged from this study sample: the intensives, who saw themselves as criminals and went about their crimes in a rather purposeful manner, and the intermittents, who were less likely to see themselves as criminals and whose crimes were less frequently but more recklessly committed. The intensives tended to commit several crimes a month but were arrested for only about 5 percent of their crimes. In contrast, even though the intermittents had generally lower rates of crimes, they were much more likely to be arrested (Petersilia et al., 1977).

As interesting and informative as these findings are with respect to career offenders and their patterns of offensive behavior, there are limitations to wider generalization of the findings in view of the small size and selected nature of the sample. Similar findings, however, have been obtained by the Institute for Law and Social Research (INSLAW) in Washington, D.C., based on information from PROMIS (Prosecutor's Management Information System) Research Project. PROMIS (1977a, b) analyzed data pertaining to all arrests for nonfederal crimes in the District of Columbia between January 1, 1971 and August 31, 1975. Information was available on 72,610 arrests which involved 45,575 defendants; the data file provided information about the frequency with which individuals were rearrested, reprosecuted, and reconvicted during the 56-month period of the study.

This major study found that persons who were repeatedly arrested, prosecuted, and convicted accounted for a disproportionately large share of street crime. For example, persons who had been arrested four or more times in the 56-month period represented only 7 percent of the arrestees but they accounted for fully 24 percent of all arrests. Thus, the extensiveness of the criminal history (regardless of whether it is expressed in terms of arrests, prosecutions, or convictions) seems to be a good predictor of future criminality. In essence, the PROMIS project found that if a defendant had 5 or more arrests before the current arrest, the probability of

subsequent arrest approached certainty. It was also found that a significant percentage of these repeat offenders switched between felonies and misdemeanors: today's petty larceny defendant may have been involved in a past robbery and might possibly be involved in a future aggravated assault or even a homicide. Similarly, 30 percent of defendants who had been arrested at least twice during the 56-month period accounted for the majority of arrests (felonies and serious misdemeanors) during this period. With respect to crimes of violence, it was found that 18 percent of the persons arrested for crimes of violence accounted for 35 percent of the arrests. Moreover, fully 26 percent of all felony cases--31 percent of robbery cases and 28 percent of the murder cases--involved defendants who had been arrested while on conditional release (pretrial release or probation or parole).

The above findings concerning persons with long and well-established patterns of serious (including violent) criminal behavior indicate that the predictive task would certainly be easier when dealing with groups consisting of individuals with fairly high frequencies of serious crime. However, although waiting until the behavioral pattern seems well-established will tend to increase predictive accuracy, the usefulness of the predictions may well be greater if made earlier in the criminal career. Also, it must be cautioned that although retrospective analysis readily reveals the small group of offenders who account for disproportionately high rates of crime, the predictive task very early in the criminal career remains quite difficult. Further, very few offenders "specialize" in crimes of violence; rather, offenders tend to be involved in both violent and property offenses.

In essence, then, the issue of predicting violent behavior raises rather vexing dilemmas with respect to the level of predictive technology, various legal and Constitutional considerations, as well as broad public policy determinations. And, while the degree of predictive accuracy remains one important consideration, it certainly is not--nor should it be--determinative for the ultimate decisions that require balancing of several societal values and objectives.

Some Relevant NIMH-Supported Research. The following are some examples of recent and current studies supported by the NIMH Center for Studies of Crime and Delinquency and bearing on issues of prediction.

Steadman and associates (Steadman et al., 1978 a, b) have undertaken research that provides a much-needed clarification and explication of the basic policy-relevant questions pertaining to the dangerousness of mental patients. These investigators compared, in a New York jurisdiction, the arrest rates of released mental patients and the general population with similar rates for released criminal offenders. Two samples were used, patients released (during a 12-month period) in 1968, and another sample released in 1975. Summarized briefly, Steadman et al. (1978a) found that patients with arrest records before their hospitalization accounted for the subsequently higher arrest rates for the released mental patients. Hospitalized mental patients without previous arrest records had later arrest rates generally lower than those of the general population. What seems to account for the higher arrest rates of mental patients (as compared with the general population) in more recent years (namely, the 1975 sample), is the fact that there were more persons in state mental hospitals who had previous arrest records.

More importantly, when comparisons were made between patients released from state mental hospitals and offenders released from penal institutions in the same jurisdiction and during the same period of time, it was glaringly evident that the ex-prisoners had subsequent arrest rates three to six times higher than those of the patients. And, with respect to violent crimes the arrest rates (per 1000) for the 1968 sample for the general population, the ex-patients, and the ex-prisoners were 2.2, 2.05, and 22.63, respectively. Similarly, the arrest rates for violent crimes for the 1975 group, and in the same sequence, were 3.62, 12.35, and 87.50, respectively (Steadman et al., 1978b).

These findings support what is well-known to criminologists. For both the 1968 and the 1975 groups, those persons (mental patients and offenders) who had

one arrest before their confinement were rearrested substantially more often than the general population, and those with multiple prior arrests had exceedingly high rates for arrests following their release. The ex-offenders had rearrest rates for violent crimes that were six to ten times higher than those of the mental patients.

Of course, given variations in civil commitment laws, related policies, and practices, as well as variations in the demographic characteristics of particular regions and the range of facilities and options for "less restrictive alternatives" for the care and treatment of the seriously mentally ill, one would expect to find some differences were the above study to be replicated in several other jurisdictions. However, it would not be surprising to find that persons with several arrests and convictions (viz., incarcerated offenders) will tend to have higher rates for subsequent re-arrests.

Another NIMH funded project followed the delinquent and criminal careers of all males who in 1964 were high school sophomores in a non-metropolitan Pacific Northwest county. The following arrest probabilities were derived from this sample (N=309) through age 29:

- About 21 percent of nonmetropolitan boys were arrested on a charge of delinquency prior to reaching age 18;
- About 50 percent of nonmetropolitan boys arrested on a delinquency charge were arrested again on an adult criminal charge prior to reaching age 29;
- About 22 percent of nonmetropolitan males never arrested on a delinquency charge were arrested on an adult criminal charge between the ages of 18 and 29.

Final results of this study (Project RO1 14806, "Maturational Reform and Rural Delinquency," Kenneth R. Polk, Ph.D.) are now being written up for publication and will provide a valuable counterpart to the earlier cited longitudinal study by Wolfgang and associates (Wolfgang, 1977) which generated similar arrest probabilities for urban males.

A different investigator in the Pacific Northwest is currently assessing the feasibility and likely pay-off of a new longitudinal study aimed at developing efficient and cost-effective methods for early prediction of subsequent delinquency. At present, the level of predictive accuracy in this area is typically below 50 percent, with the result that current programs aimed at early treatment of delinquency are involving many children who do not need such treatment. If the level of predictive accuracy can be sufficiently improved, prevention programs will be in a better position to achieve greater cost-efficiency in delivery of services and possibly in outcome effectiveness as well. (Project RO1 MH 32857, "Multivariate Prediction/Understanding of Delinquency," Gerald R. Patterson, Ph.D. and Rolf Loeber, Ph.D.)

Another current study, which has been conducted in collaboration with the National Institute of Juvenile Justice and Delinquency Prevention, involves a multicohort longitudinal panel design with a national probability sample of 1,725 male and female subjects aged 11 to 17 in 1976. The primary focus of the study to date has been on the epidemiology of delinquent behavior in the American youth population. As further data accumulate, the project will test a new integrated theory of delinquency and generate new predictive statements with respect to extent and seriousness of delinquency and early adult criminality in the entire sample and in subsamples. The findings thus far indicate that while about 85 percent of the sample youth had some involvement in delinquency over a three-year period, only about 5 percent committed serious crimes. No evidence was found for a general race differential in the incidence or prevalence of delinquency, although Anglos had generally higher rates for theft offenses, public disorder offenses, and drug use, while Blacks had higher rates for felony assault and robbery offenses. At a global level, delinquent behavior was found disproportionately

among lower/working class, male, urban/suburban youth between the ages of 15 and 17. (R01 MH 27552, "The Dynamics of Delinquent Behavior - A National Survey," Delbert S. Elliott, Ph.D.)

Future Plans. The understanding and prediction of behavior is of fundamental importance in efforts to address a variety of mental health, criminal justice, and related societal concerns. Given the complexities involved, the research endeavors in such areas need to be sustained over a long period of time to build upon previous and existing studies, and thus to move in an incremental fashion to improve fundamental understanding of the ways in which such knowledge can be refined and applied to various social needs. Thus, the program priorities of the NIMH Center for Studies of Crime and Delinquency have remained somewhat stable over time, although adjustments and refinements are made in response to Congressional directives, Departmental and Agency priorities, as well as developments in the substantive areas of scientific concern.

The Center plans to continue its efforts to better understand violent behaviors, to improve our ability to predict such behaviors more reliably and accurately, and also to develop more effective means for the handling and treatment of such behaviors. Clearly, violent behavior is not of concern only to the criminal justice system. For example, problems pertaining to aggressive and antisocial behaviors account for a large proportion of children brought by parents to mental health centers, child guidance clinics, and related treatment facilities. And, if such patterns of childhood behaviors can more effectively be treated (in large measure by improving "parenting skills"), later and more serious problems in the home, community, in schools, as well as later serious delinquent and criminal behavior may be prevented.

Another area in which further research is needed would involve replication of the earlier cited study by Steadman et al. which compared the actual dangerousness of

persons released from mental institutions and of persons released from penal institutions in the same jurisdiction. Additional studies of this type are needed to inform public policies, programs, and practices pertaining to the commitment, treatment, and release of the mentally ill. As indicated earlier, despite the lack of systematic supportive evidence, mentally ill persons who have not yet engaged in any actual violent behavior (but may only have threatened to do so) can much more readily be subjected to preventive confinement than persons with long and even glaring records of serious and violent crimes.

As the foregoing discussion has also suggested, much more needs to be understood about specific features of social settings that elicit or provoke violent behaviors by certain persons. Such research could add significantly to our understanding of interpersonal violence and our ability to predict it. Through such improved knowledge, better decisions could be made as to whether a particular offender or mentally ill person requires institutionalization in order to protect the community or can be left in the community provided he or she can be closely supervised, accepts certain treatment, or agrees to avoid the social settings that have been the occasion for violent interactions. And, to the extent that effective treatment can eliminate certain types of violent behaviors in some individuals (e.g., as a possible outcome of treatment research currently being supported on sexual offenses such as pedophilia and rape), the subsequent criminal recidivism can be reduced.

Finally, while it has been observed that the notion of prevention is "breath-takingly plausible," effective implementation of this idea in the field of violent behavior can be very difficult. In general, two essential elements of technology are needed. First, the ability to predict the likelihood that the behaviors of concern will occur. Second, effective means of intervening to change or avert the predicted behaviors. Unless or until such technologies are available, prevention programs may not be very effective no matter what their scale or expense. Continuing research on prediction and treatment of violent behavior is clearly needed if we are to have any

realistic hope of mounting successful efforts to reduce the incidence of such behaviors and the social harms that result from it.

In the letter requesting this statement I was asked about what can reasonably be expected to be accomplished if support for prediction research is continued at approximately the current levels. My response has to be qualified by the uncertainties inherent in the scientific research enterprise. Most certainly we should be able to develop more and improved knowledge and understanding about the phenomena of concern. Systematic, incremental improvements in predictive and intervention technologies could also be expected. But we should not be too sanguine about expecting quick research "breakthroughs." In the main, efforts to improve understanding of the phenomena of violent behavior and of ways in which to prevent and treat such behavior more effectively, will entail slow and laborious efforts. And of course the new knowledge, as it accumulates, can help progressively to inform and guide relevant public policies and programs.

The letter also inquired about the consequences of a decline in the level of support for such research. I can only answer this in terms of noting that, over the past several years, this Center with a fairly stable level of funding (in constant dollars) has been able to fund about 10-12 new research projects each year. These were projects that had successfully passed a very demanding NIMH "peer review" process in which about 75 percent of the applications were not recommended for funding on the basis of scientific and technical weaknesses. Of the projects funded, about three each year pertain to the Center's program priority of individual violent behavior.

In closing, I hope that the above information will be of some help to the Subcommittee.

Saleem A. Shah, Ph.D.
Chief, Center for Studies
of Crime and Delinquency

REFERENCES

Cocozza, J. J., and Steadman, H.J. Some refinements in the measurement and prediction of dangerous behavior. Am. J. Psychiatry 131:1012-1020, 1974.

Cocozza, J. J., and Steadman, H. J. The failure of psychiatric predictions of dangerousness: clear and convincing evidence. Rutgers Law Review 29:1084-1101, 1976.

Endler, N.S., and Magnusson, D. Toward an interactional psychology of personality. Psychol. Bull. 83:956-974, 1976.

Fairweather, G.W. Methods in Experimental Social Innovation. Wiley, New York, 1967.

Fairweather, G.W., Sanders, D., and Tornatzky, L. Creating Change in Mental Health Organizations. Pergamon Press, New York, 1974.

Monahan, J. The prediction of violence, in Violence and Criminal Justice. D. Chappell and J. Monahan, eds. Lexington Books, Lexington, Mass. 1975, pp. 15-35.

Monahan, J. Prediction research and the emergency commitment of dangerous mentally ill persons: a reconsideration. Am. J. Psychiat. 135:198-201, 1978a.

Monahan, J. The prediction of violent criminal behavior: a methodological critique and prospectus, in Deterrence and Incapacitation: Estimating the Effects of Criminal Sanctions on Crime Rates. A. Blumstein, J. Cohen, and D. Nagin, eds. National Academy of Science, Washington, D.C., 1978b, pp. 244-269.

(Note. Developments in the law--civil commitment of the mentally ill. Harvard Law Review 87:1190-1406, 1974.)

Petersilia, J. Career criminal prosecution: an idea whose time has come. Prosecutor's Brief, July-August, 24-27, 1978.

Petersilia, J., Greenwood, P.W., and Lavin, M. Criminal Careers of Habitual Offenders. Rand Corp., Santa Monica, California, 1977.

PROMIS Research Project. Highlights of Interim Findings and Implications. (Publ. 1) Institute for Law and Social Research, Washington, D.C., 1977a.

PROMIS Research Project. Curbing the Repeat Offender: A Strategy for Prosecutors. (Publ. 3) Institute for Law and Social Research, Washington, D.C., 1977b.

Schwitzgebel, R.K. Survey of state civil commitment statutes, in Civil Commitment and Social Policy. A.L. McGarry, R.K. Schwitzgebel, P.D. Lipsett, and D.Lelos, eds. (Final Report on NIMH grant MH25955) Laboratory of Community Psychiatry, Harvard Medical School, Boston, Massachusetts, 1978, pp. 70-104.

Shah, S.A. Dangerousness: some definitional, conceptual, and public policy issues, in Perspectives in Law and Psychology, vol. 1. B.D. Sales, ed. Plenum, New York, 1977, pp. 91-119.

Shah, S.A. Dangerousness: a paradigm for exploring some issues in law and psychology. Am. Psychol. 33:224-238, 1978a.

Shah, S.A. Dangerousness and mental illness: some conceptual, prediction, and policy dilemmas, in Dangerous Behavior: A Problem in Law and Mental Health. C.J. Frederick, ed. U.S. Govt. Printing Office, Washington, D.C., 1978b, pp. 153-191.

Shah, S.A. Dangerousness: some conceptual, prediction, and public policy issues. In: J.R. Hays, T.K. Roberts, and K.S. Solway, eds., Violence and the Individual. New York: SP Medical and Scientific Books, 1981, pp. 151-178.

Shinnar, R., and Shinnar, S. The effects of the criminal justice system on the control of crime: a quantitative approach. Law and Society Rev. 9:581-611, 1975.

Steadman, H.J., and Cocozza, J.J. Careers of the Criminally Insane. Lexington Books, Lexington, Massachusetts, 1974.

Steadman, H.J., and Cocozza, J.J. Psychiatry, dangerousness and the repetitively violent offender. J. Criminal Law & Criminology, 69:226-231, 1978b.

Steadman, H.J., Cocozza, J.J., and Melick, M.E. Explaining the increased arrest rate among mental patients: the changing clientele of state hospitals. Am. J. Psychiatry 135:816-820, 1978a.

Steadman, J.J., Vanderwyst, D., and Ribner, S. Comparing arrest rates of mental patients and criminal offenders. Am. J. Psychiatry 135:1218-1220, 1978b.

Toch, H. Violent Men: An Inquiry into the Psychology of Violence. Aldine, Chicago, 1969.

Toch, H., Grant, J.D., and Galvin, R.T. Agents of Change: A Study in Police Reform. Schenkman Publishing Company, Cambridge, 1975.

Wenk, E.A., Robison, J.O., and Smith, G.W. Can violence be predicted? Crime and Delinquency 18:393-402, 1972.

Wolfgang, M.E. From boy to man--from delinquency to crime. Paper delivered at the National Symposium on the Serious Juvenile Offender, Dept. of Corrections, State of Minn., Minneapolis, Sept., 1977.

Wolfgang, M.E., Figlio, R.M., and Sellin, T. Delinquency in a Birth Cohort. University of Chicago Press, Chicago, 1972.